

HOFFMAN'S FARM SEEDS

1919



A·H·Hoffman inc

LANDISVILLE *Lancaster County PA.*

CLOVERS - ALFALFA *Seed for Hay and Pasture*
CORN - OATS - GRAINS - POTATOES - FIELD PEAS AND BEANS

HOFFMAN HOMESTEAD FARM

OUR MONEY BACK PLAN

Under which we have been selling Seed for years satisfactorily, both to ourselves and our customers, is continued—

Seed bought from us that is not found to be satisfactory upon its arrival, may be returned at our expense, and your money plus freight it has cost you, will be refunded in full.

We will not be responsible in any way for Seed or resultant crop after it is planted. Too many conditions with which we can have nothing to do are involved after the seed is sown.

A. H. HOFFMAN, Inc.

Bags are Free and not Weighed in with Seed.

Others charge you extra for bags—we don't. Consider this when comparing our prices—bags are very expensive.

Freight will be prepaid as clearly stated in these offers:—

Freight Paid Offer No. 1

We will pay all freight charges on orders amounting to 300 pounds or over to be shipped at one time to any freight station in Pennsylvania, West Va., Dela., R. I., Virginia, Ohio, Maryland, N. Y., Mass., N. J. and Conn.

Freight Paid Offer No. 2

If you are not in our Freight Paid Territory and order 300 pounds or more, we allow 20c per 100 to help pay freight charges. Deduct this allowance from your remittance when ordering.

(This brings our business close to your door. You will know exactly what your seed costs you—sacked and delivered.)

Shipments by Express are sent "Charges Collect." If you order 300 pounds or over sent by Express—we will refund to you what the freight charges would have been under our Freight Paid Offers.

(When Seed is to be Forwarded by Parcels Post, add for Postage as per Schedule on back of enclosed Order Sheet.)

Order Early—It takes Longer nowadays for both Freight and Express. Make sure of overcoming delays by sending us your order early—at once!

Prices Change. We omit quotations from catalog. This is due to constant changes in values and our desire to quote closely. A separate "Price List" is mailed with this catalog. If you delay placing your order ask us for latest "Price List" when you are ready. "Price Lists" will be mailed as often as you ask for them.

Payment Must Accompany Orders. Remit by Money Order, Draft, or Cash by registered mail. Your check will be acceptable if you have money in bank. Don't ask us for credit—we can't do business that way. Our customer's standing remains unknown to us even though he may order year after year.

A. H. HOFFMAN, Inc.

LANDISVILLE, LANCASTER COUNTY, PENNSYLVANIA

Brief Statements on the 1919 Seed Situation

Relative to Supply. Clover is short—no seed was carried over. Alfalfa—short. Seed Corn—not yet determined until winter has passed. Oats—plentiful. Other spring grains—good supply. Timothy—big crop. Light Grass Seeds—mostly very short crops. Soy Beans, Cow Peas—fair crop. Maine grown seed potatoes—fair crop.

Relative to Demand. Over in Europe, the same conditions as apply to the food situation apply also to seed. These countries are practically out of seed. All their reserves are used up. They must buy this year. Naturally, United States will be their market. They have already bought considerable Clover, Timothy and other grass seeds. Their needs are enormous; demand from overseas will be heavy. This foreign demand will no doubt continue for several years. The American farmer foresees this; he is the man to produce the supply for these foreign countries. The outlook for him is very bright. He knows the value of good seed and will use it liberally this year. 1919 will witness a heavy demand for all of America's agricultural seeds on both sides of the Atlantic.

Relative to Prices. Prices will continue high. Europeans in the past have been paying good prices for American seed; 1919 will be no exception. Our prediction is that prices will rule very high all through the season—the law of supply and demand will govern them.

The outlook for agriculture for the year 1919 could not be more promising. Prices of farm products have risen to a level that leaves a nice profit to the farmer. There cannot be a serious over-production of farm products for years to come. The tiller of the soil, who would get his full share of profits from his 1919 farming operations, will not start his crops with the severe handicap of poor seed. This catalog is issued to point the way to the proper seed to use; good, clean, strong-germinating seed, of dependable strains. Entrusting your seedlings this spring to these offerings will please you and pay you.

A. H. HOFFMAN, Inc.

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Successful Hay Production Depends on Good Seed

CLOVERS

Clover is necessary to successful farming—it has an important place in every scheme of crop rotation. Every farmer realizes the value of a plowed-under clover sod to crops that will follow. This year, because of the very high-priced seed, some are thinking of cutting their portion of clover seed way down. Before this would be done, this important fact should be carefully considered—that the value of the clover plant to the soil is going to be the same this year, as it was in past years when seed was much cheaper. The soil is going to need clover just the same. And its value is hard to replace. The nitrogen it supplies at the roots of the plant will be lacking, and will show its absence on the crops that are to follow. This nitrate element will have to be supplied by some other means, if the land is to retain its productiveness. Commercial fertilizers are too high-priced to substitute them.

Besides the value to the land, the hay of the clover plant is very nourishing, and is by far richer in its protein content than the other grasses, and in this respect cannot be replaced by any of them. Farmers should continue to place a great deal of dependence on the growing of the Clovers.

The production of Clover Seed in our country this year was considerably below normal. There was no carry-over—practically all old reserve stocks of seed came on to the market last year. European countries are this year heavy buyers of American seeds—clover is one seed they require in large quantities. These conditions make it appear that prices are going to continue very high all through the seeding season.

A Word about Grades of Clover Seed

Have you ever noticed that every local dealer in seed, will claim to sell only the first grade? The careful farmer should not be deceived by such claims. In an ordinary year not more than one-fourth of the crop could be made into real first grade. More than three-fourths of all the Clover sold is under "first grade." The names—Fancy, Choice, Prime, and Fair, are also very much abused by many local dealers and really do not mean anything.

Hoffman's Three Brands of Clover Seed

"Extra" is our best known and most popular brand. Wherever Hoffman's Grass Seeds have been used, the trade name "Extra" is familiar. "Extra" stands for very high quality. It means seed that is right as to color, high in purity—and high and strong in germination.

Hoffman's "Extra" Clover is selected for us by careful buyers in the greatest producing sections of the country. It is cleaned here over our own modern machinery to a standard of excellence that is well known to thousands of careful farmers who have used "Extra" with pleasing results for many years.

"Extra" is our standard brand. It rivals the very best brands of our competitors. It is cleaner and purer and more dependable than the contract Prime seed traded in on the Toledo Seed Exchange. "Extra" brand will please you.

When comparing our prices of Clovers do not overlook our "Bags Free" and "Freight Paid" Offers.
(See Page 1)
Others don't quote you this way.

"Northwest" brand clover seed comes from regions of the far North and West—from the States along the Canadian line—from the Great Lakes west to the Pacific—including the famous Black Hill and North Rocky Mountain districts. This is beautiful, plump, large-berry seed. Highly cleaned—not necessarily cleaner than our "Extra" brand. You know the additional value of Alfalfa seed from these far north sections. The superiority of clover is just as marked. Seed produced in these sections under severe climatic conditions must possess a degree of hardiness and vigor unknown to seed from sections further South.

Clover plants that live through these severe Northern winters—experiencing frequent thawing and freezing—spring and fall—have surely had the right kind of a test. Seed produced from such plants carries the vigor of its parent plant, and when taken into other sections and seeded there, has proven its ability to excel other common clover. "Northwest" brand clover is earlier, surer and hardier. Customers who purchased Northwest brand clover when we first offered it four years ago are now regular buyers season after season. They now firmly believe—from their own experience—in the superiority of this seed from these rigid northern districts.

"Safe" brand clover seed is first, what its name implies—"Safe to sow." Safe because of its freedom from foul seeds—Safe because of its strong germination. "Safe" Clover is not equal to our "Extra" or "Northwest" brands, but matches qualities of the many so-called "best" grades offered you. It is superior to the seed sold by the average country dealers.

"Safe" is offered to meet competition, both in price and quality—as a competitive brand it is a success. Many cheaper grades of Clover could be offered, but we regard "Safe" as the cheapest grade of dependable quality, that anyone should use.

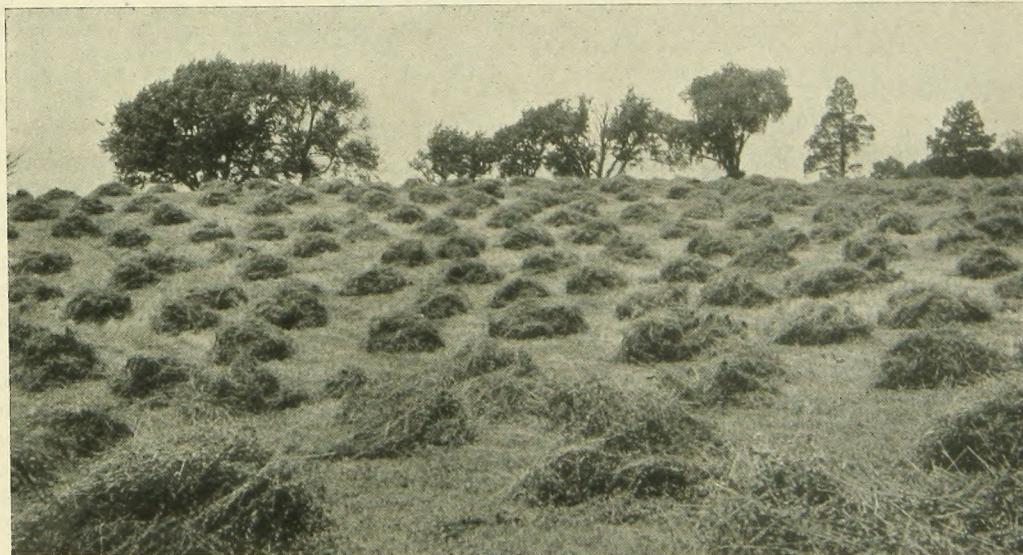
VARIETIES OF CLOVERS

Medium Red Clover, more commonly known as "Little Red Clover" and "June Clover." This is the best known grass seed. Along with Timothy, it forms a combination from which nine-tenths of our hay is produced. It is the most popular clover and rivals Timothy as the most popular grass. Medium Red Clover is easily started on most soils. It is invariably sown in the late Winter or early Spring on land that was sown to grain and Timothy during previous Fall. By this method Clovers are started without any special preparation of the land. The culture given for the benefit of the grain having prepared the ground to receive the Clover Seed.

The ideal time to seed Clover Seed, either Medium, Mammoth, or Alsike, is during late Winter or early Spring, upon a day when the soil is honeycombed by frost. Seeded under these conditions the first slight thaw will enclose nearly every seed and enable it to start its life of service. When the grain crop is harvested the Clover will be well established and at once make rapid growth. Sow 3 to 6 quarts Medium Red Clover per acre when it is sown where Timothy also has been seeded. If clover alone is desired, sow 6 to 8 quarts per acre.

Failure of Clover on any farm means loss of opportunity to gather nitrogen from air at little cost and to cheaply produce great tonnage of hay, rich in protein, which is the flesh and blood building element of feeds. Quality of seed is very important to successful establishment of Clovers.

Our business is to furnish the seed. We offer three brands of **Medium Red Clover**. See specifications above. The cheapest of these is "Safe to Sow." The other two, "Extra" and "Northwest," will please you no matter how critical you are as to either price or quality. See Price List.



Depend on Hoffman's Clover Seed for Good Crops of Clean Hay



This Farmer Uses Hoffman's Grass Seed Every Year—He Gets Results

Mammoth Clover, also known as "Sapling," "Pea Vine," and "Large." It is very much like the common red variety. The blossom and shape of leaves is the same and it is used for much the same purpose. Mammoth Clover is a little coarser in the stem, grows a little taller, ripens a little later, and its roots penetrate a little deeper into the soil. It produces but one crop of hay and produces less pasture after seed is produced than common Red Clover. It will thrive on poorer soil than Red Clover and withstand drought, as well as freezing, quite well. It should be sown about the same as Red Clover. Mammoth Clover makes excellent hay—is good for green manure and is a great gatherer of nitrogen.

We sell only one brand, "Extra" Mammoth. It has all of the qualities of cleanliness and germination we claim for "Extra" Medium. Besides this, we take unusual precautions to provide Mammoth true to name. Much of our Mammoth comes right from growers making a specialty of this type, and other stocks are selected in communities where Mammoth Clover is grown almost exclusively. See Price List.

Alsike Clover is much like Medium Red in manner of growth. The blossom is nearly white and the seed is very small with its color light to dark green. While Alsike is rapidly gaining favor as a valuable grass it is not yet as widely known as it should be. Alsike is not quite as tall as Red Clover but makes a finer hay. Alsike is mostly used in combination with Red Clover. The proper proportion to mix the seed is two parts Red Clover to one part Alsike, or three parts Red Clover to one part Alsike. This will make the growth about half and half of each. The Alsike seeds are much smaller than Red Clover Seed. It is economical to sow part Alsike, as a little less seed is needed. A bushel of Red Clover and Alsike Seed mixed as here recommended will reach as far as $1\frac{1}{4}$ bushels straight Red Clover. When Clover Seed is high quite a saving can be effected by substituting some Alsike for Red Clover. Alsike catches better than common Red—it is therefore some insurance against failure to sow Alsike along with Red Clover, for the Alsike will succeed when Red Clover on account of unfavorable conditions may fail—the surviving Alsike will be sufficient to make a satisfactory crop. We offer "Extra" Alsike and "North-West" Alsike. Everything we have to say of "Extra" and "North-West" under description of "Our Brands," pages 2 and 3, is equally applicable to our Alsike brands of same name. See Price List.

Alfalfa Seed. See pages 6, 7, 30, 31, and Price List.

Economical Mixture of Red Clover, Timothy and Alsike

This is a combination that is a very proper one to sow for either hay, pasture or soiling purposes, and is sold so cheaply that it will appeal to all who wish to save something in grass seed bills. The proportion is approximately one-fourth Timothy, one-fourth Alsike, and one-half Medium Red Clover. The reason that this mixture can be sold cheaper than the separate grasses is as follows: **Economical Mixture** is made from lots of Clover and Timothy (Mixed) and lots of Alsike and Timothy (Mixed) that were produced and harvested in this mixed condition. The market for such seed being narrow the farmer who grows it sells it for much less than he could get if the grasses were separate. On account of the difference in size and weight of these seeds they can not be cleaned quite so perfectly as unmixed seed, but otherwise the mixture is made up of seed that in every respect is equal to that in our regular best grades and easily passes the seed law requirements of any State. Prices—See Price List.

If you have a piece of land that you'd like to get into a permanent pasture—seed it this Spring with Hoffman's "Permanent Hay and Pasture Mixture." You get a nice stand this Summer and have pasture that will last for years. See page 9.

Unless your soil is full of the proper bacteria for clovers it will pay to "Farmogerm" clover seed of all varieties. See page 32. "Farmogerm" will be effective even when seed is exposed to direct rays of the sun. When sown on top of a grain field—even on top of the snow—the tiny bacteria get into the very small crevices of the seed shell, to give the crops sufficient inoculation.

Sweet Clover. The most popular variety of this valuable Legume plant is the Biennial White Blossom (*Melilotus Alba*). This plant lives two years, then dies. Planted either Spring or Fall of one year it will live until Fall of the following year, when the plant will die. If left to go to seed, Sweet Clover will reseed itself and last on the same ground for years.

The value of Sweet Clover is for hay, pasture, soil improvement, and to inoculate soils for future Alfalfa crops.

Sweet Clover sown in the Spring will make a fine growth of hay in the Fall of the same year. The growth may be from two to four feet tall. The next Spring, growth is rapid and may be used for either hay or pasture. Two crops of hay may be made and then another crop will follow in the late Fall. This last crop will go to seed. This cutting will also make hay but it will be of a coarse nature and not nearly as palatable as the crops that are made earlier in the season before the Clover blooms.

Sweet Clover seeded during the late summer will not make a crop of hay the first season but it will furnish fine pasture and in the following season will yield either hay or pasture in abundance, the Clover growing five to eight feet tall.

Cattle soon become accustomed to Sweet Clover pasture and prefer it to almost any other grass.

It is a splendid practice to sow Sweet Clover in corn fields at last cultivation. If good seed is used and put into the soil under favorable conditions a fine growth of Sweet Clover will result, furnishing pasture for late Fall, a Winter covering, and pasture again in the early Spring.

Inoculate this
Seed with
FARMOGERM.

Sweet Clover will do well in almost any kind of soil. About twenty pounds per acre should be seeded either in the Spring or in the Fall. The seed should be covered. If the soil has not grown Sweet Clover

heretofore the seed should be inoculated. The best form of inoculation is "Farmogerm." There is nothing better to bring a worn-out field into farmable condition at little labor and expense than Biennial White Blossom *Melilotus*. It is worthy of any good farmer's attention for this purpose. Prices—See Price List.

White Clover. Known also as "Dutch" Clover. Has a low creepy growth. Constantly renews itself—its stems coming in contact with the earth and thus forming new plants. Very valuable for permanent pasture, lawns. Its blossoms furnish abundant nectar for bees. See Price List.

Crimson Clover is used largely for a cover crop and for plowing under for soil improvement. It should find more general use for these purposes. It will make good hay but it ripens in May when good haying weather is not usually at hand. Crimson Clover is not a perennial—will last only one year. It should not be seeded until July 1st, when it may be sown where early potatoes have been harvested, or in corn fields at last cultivation. It will often furnish pasture over Winter and during early Spring. For a cover crop Crimson Clover will make an abundant growth, ready to turn under May 10th to 25th—in time to turn under for most any Spring crop. By sowing Crimson in corn or after an early Spring crop you can add an immense amount of humus and nitrogen to your soil without missing a money crop.

Crimson must be sown, however, with some care. When you sow in a corn field you should first sow the seed, then cultivate so as to cover it. If you follow potatoes or grain crops, disc the land and harrow in the Crimson Seed. In an open field, rolling is advisable after seed is sown. Sow about one bushel to four acres. You will get a better stand and gather more nitrogen if you inoculate your seed with Farmogerm, fully described, page 32. See Price List.

Do You Grow Your Own Clover Seed? If you have produced Clovers or other grass seed on your farm you are fortunate, provided you are fixed with a Cleaner to make it fit to sow. If you don't have a suitable Cleaner let us sell you a "Clipper," fully described and quoted inside back cover of catalog.

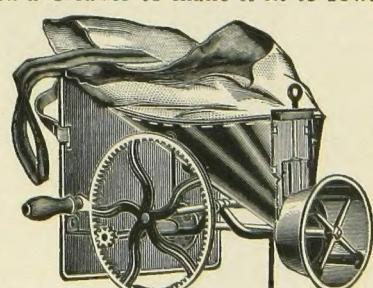
The "Cahoon" Seed Sower is accepted everywhere as the world's standard sower. It is the most accurate and the most durable. It is made of steel, iron and brass and will last as long as any farmer and still be as serviceable as when new. Full directions go with every machine. Adjustments are easily made, and it is a pleasure to operate. We send them to our customers packed up in corrugated fibre boxes by parcel post, postage prepaid for \$5.00 each.

National Seeder is accurate, light in weight and inexpensive. Not as durable as the "Cahoon," but if oiled carefully will do good work a long time. Price, \$1.00, postage prepaid.



Plant of Sweet Clover

Inoculate this
Seed with
FARMOGERM.



The "Cahoon" Seed Sower

FACTS ABOUT ALFALFA

"There is no State in the Union in which Alfalfa cannot be successfully grown."

Alfalfa produces from 3 to 7 tons hay to the acre.

It has as much protein as Wheat bran.

360 stalks have been grown from one seed.

It does not exhaust the soil, it enriches the soil.

It will grow 3 to 5 crops a year.

Alfalfa in money value is worth 45 per cent. more than other Clovers and 60 per cent. more than Timothy.

One acre will pasture 20 pigs for 6 months.

Three pounds a day makes a full feed for fattening lambs.

Four to five pounds makes full feed for fattening aged sheep.

Thirty-five pounds makes full feed for fattening steers.

Sheep fed on Alfalfa will gain from 8 to 15 pounds in 75 days and will double with small grain ration added.

Lambs wintered on Alfalfa will produce one to two pounds more of wool than when on the ranch.

Fed to dairy cows Alfalfa maintains the flow of milk equal to June Grass. It can be chopped fine with corn meal.

Such a mixture is worth more a pound than the original corn meal.

"Its long branching roots penetrate far down, push and crowd the earth this way and that, and thus constitute a gigantic subsoiler. These become an immense magazine of fertility. As soon as cut, they begin to decay and liberate the vast reservoir of fertilizing matter below the plow, to be drawn upon by other crops for years to come."

ALFALFA

Many interesting facts in addition to the above might be cited about Alfalfa. Every year sees many more acres of this wonderful forage and soil-enriching crop. Here in the East Alfalfa may be cut 3 times a year. It will yield 3 to 6 tons of the most valuable hay each season. Alfalfa is rich in

protein and equal in feeding value to bran. The first cost of starting Alfalfa is considerable, but if you divide this between the 5 to 8 years that the field will last without reseeding, it will figure smaller than for other crops that have to be seeded every year or two.

Land planted to Alfalfa is constantly gaining in richness, while

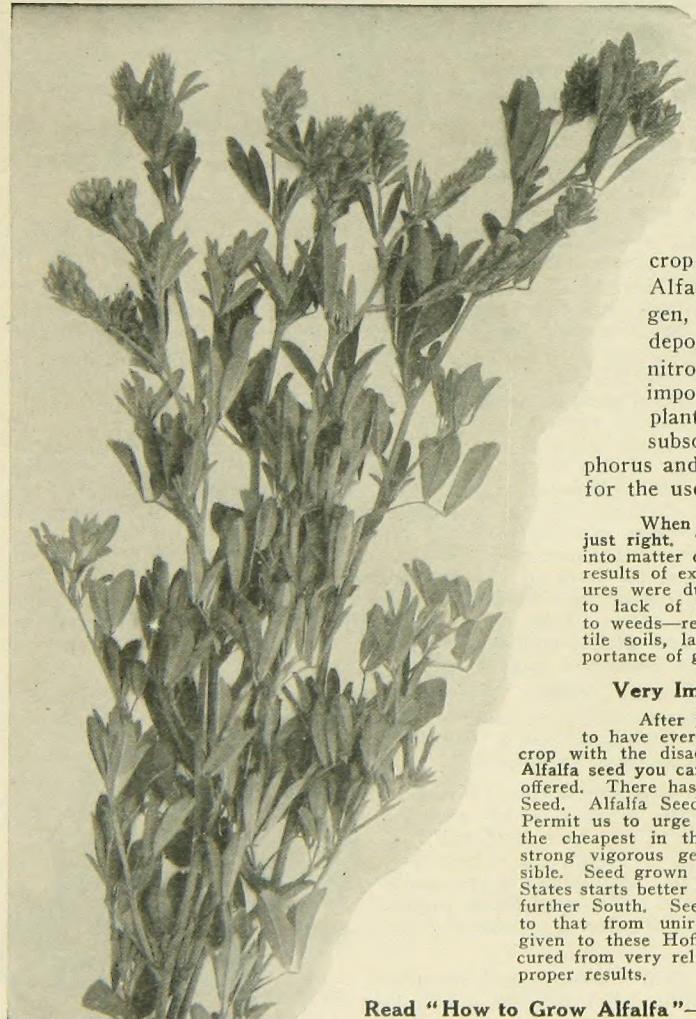
crop after crop of hay is being taken off. Alfalfa doesn't ask the farmer for nitrogen, but gathers it itself from the air, and deposits great quantities in the soil. And nitrogen, as you know, is one of the most important elements in the soil. The Alfalfa plant's long roots reach down into the subsoil many feet, and bring up phosphorus and potash, and store it near the top-soil for the use of succeeding crops.

When starting Alfalfa follow out every particular just right. The Michigan Experiment Station has gone into matter of Alfalfa failures very thoroughly, and from results of extensive tests, they say that:—34.4% of failures were due to poor preparation of seed bed—30.6% to lack of inoculation—12.4% to winter killing—9.7% to weeds—remainder of failures due to poor seed, infertile soils, lack of drainage. So you will note the importance of getting off to a start that is just right.

Very Important to Use Good Alfalfa Seed

After you have spent much time and taken pains to have everything else done just right—don't start this crop with the disadvantage of poor seed—Buy the very best Alfalfa seed you can procure. There are always inferior grades offered. There has never been an excess of real good Alfalfa Seed. Alfalfa Seed of real merit always sells high in price. Permit us to urge the use of this kind of seed—it is by far the cheapest in the end. Use only highly-cleaned seed—of strong vigorous germination—bright in color—plump as possible. Seed grown in the short seasons of the Northern border States starts better and stronger and is surer than that produced further South. Seed produced on irrigated land is not equal to that from unirrigated land. Special attention has been given to these Hoffman strains here described. They are secured from very reliable sources and can be depended upon for proper results.

Read "How to Grow Alfalfa"—pages 30 and 31.



Hoffman's "Northwest" Alfalfa

This brand is recommended unconditionally to our customers. The very choicest strain of Alfalfa Seed possible to secure. It is the cleanest, brightest and strongest seed from non-irrigated fields in the far Northwest. This includes the districts adjacent to the North Rockies and Black Hills, the most Northern sections where Alfalfa Seed can be matured. Very little of the seed ever reaches the Eastern markets. "Northwest" Alfalfa possesses vigor and hardiness unequaled by seed grown elsewhere. Only a strong, vigorous strain can endure the climatic conditions of the Northland. Feeble plants can't live there. Therefore, the seed matured is only from strong plants of the most hardy types.

Most of the quality of seed from this section fit for our North-West brand is eagerly purchased for re-seeding right in the states where it is produced. Our stocks were procured with the greatest difficulty, and at prices that forbid the possibility of selling as low as the common Alfalfas in the market. However, the price is within reach. We firmly believe that one-fourth less of our "North-West" Alfalfa seed is needed per acre than of the common brands; so that the use of this hardy strain of Alfalfa from the Black Hills and North Rockies is really a matter of economy.

At this writing we are the fortunate owners of large stocks of this strain—but we urge our customers to order this brand long in advance of seed time. Most of our trade demands "Northwest" Seed, and we are confident present stocks will not last us through the season. See Price List.

Hoffman's "Extra" Alfalfa

Hoffman's "Extra" Alfalfa is not second grade by any means. It represents the very highest possible degree of purity, as well as germination. Beautiful as to color. It is Northern grown, American, unirrigated seed. Not grown as far North as our "Northwest" brand but in a latitude that makes it suitable for culture all over the Middle Atlantic States. Hoffman's "Extra" is a grade that very rarely finds its way in Eastern Seed Stores. We have sold Hoffman's "Extra" Alfalfa for years here in the district served by us and it has given complete satisfaction. It will compare favorably with any competing brand in the market, both in purity and growth. In vigor and hardiness it is second only to our "Northwest." See our Price List.

"Grimm" Alfalfa

A Splendid Stand from "North-West" Alfalfa Seed

It is claimed for Grimm Alfalfa that it has larger crowns and a more spreading root system than other strains of Alfalfa, and that Grimm Alfalfa will start better in undrained, wet locations. The reputation of Grimm Alfalfa was made before the splendid hardy and prolific strains were developed in the Black Hills and North Rockies, and at present these new Alfalfas produced in the Northland are close competitors with the Grimm strain. Grimm Seed is held at almost prohibitive prices. Our "Northwest" ranks so high and costs so much less that we are not sure it pays to sow Grimm.

Our "Grimm" Seed was grown in the Black Hill region. If you order "Grimm," tell us if we may substitute "Northwest" if we are sold out of "Grimm." See Latest Price List.

Complete instructions "How to Grow Alfalfa"—pages 30 and 31.

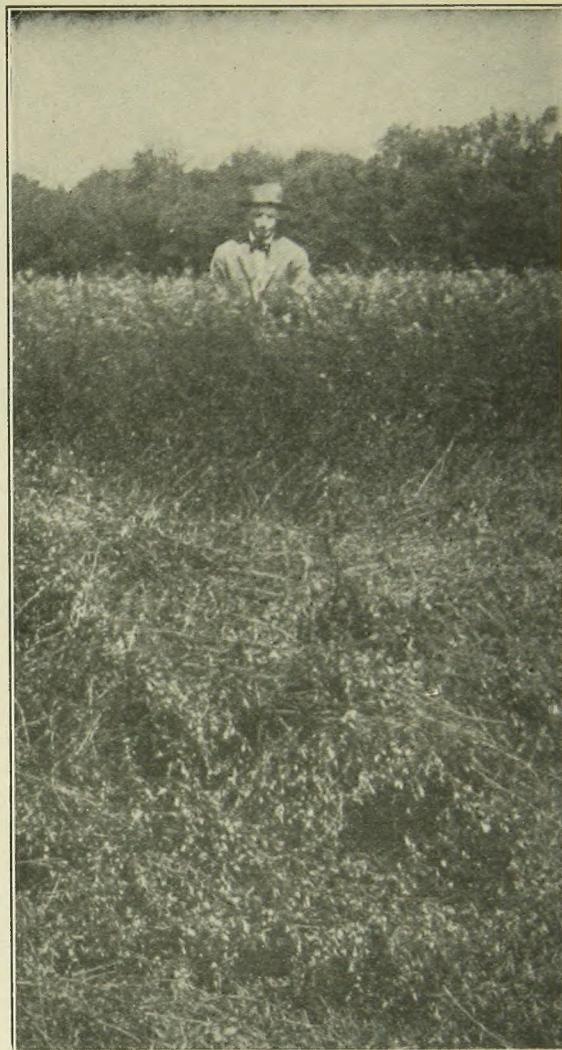
"FARMOGERM"—The Best Inoculation for Alfalfa

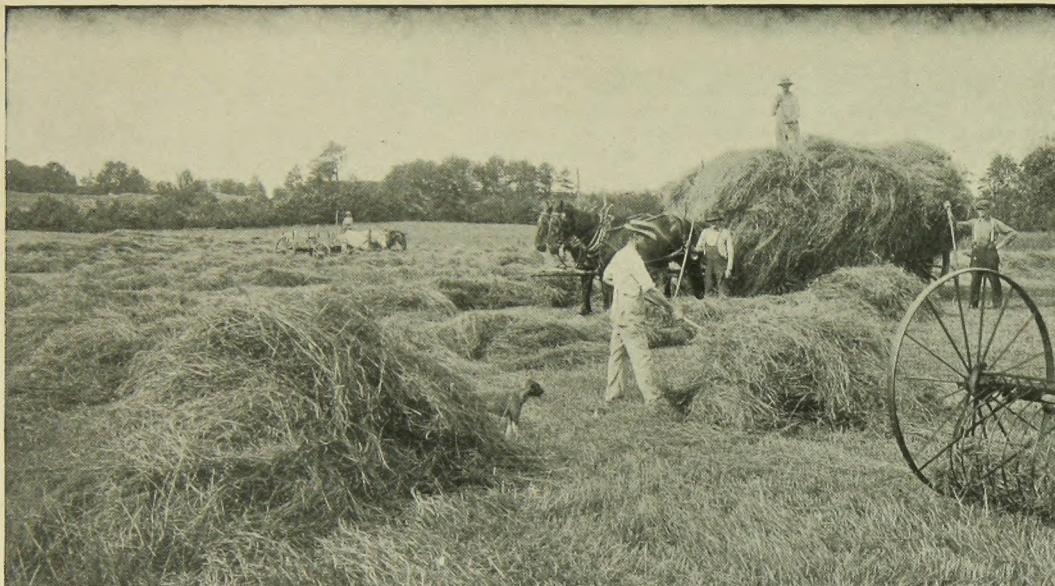
Farmogerm is the highest grade—most successful inoculation for all the legume seeds. Farmogerm is a pure culture, or growth of tiny bacteria. When applied to the seeds of legume plants will produce large quantities of nitrogen. This is formed in the little nodules attached to the roots of the plant—thus storing this valuable property—nitrogen—in the soil for crops that follow. Besides this, Farmogerm will increase the yield of the plant, both in size and feeding value.

Beyond all doubt, it pays well to inoculate seed with Farmogerm. The patented stopper used in the Farmogerm bottles keeps the bacteria alive and active for many years, so that you don't have to wait until the last minute to order and run the risk of delay as you do when using cultures in sealed bottles.

You should make it a rule never to plant any other legume without first inoculating the seed with Farmogerm. It is simply applied. No trouble, no bother, small expense, but sure results.

When ordering be sure to state you want Farmogerm for Alfalfa—each crop takes a different culture. Prices— $\frac{1}{4}$ -acre size bottle, 50c; 1-acre size, \$2.00; 5-acre size, \$7.50. Postage Prepaid.





TIMOTHY SEED

Timothy, sown either alone or with Red Clover, forms a great bulk of the hay production in this country. It is too well known to need much description. It is so universally used that it needs no recommendation. Timothy is very easily established. The seed is inexpensive and easily sown. It is very hardy, easily enduring extremes of either heat or cold. When intended for pasture Timothy should be sown along with Clover. These two grasses do well together. Timothy does not make a sod by itself, but with Clover will produce a growth that can be pastured with safety to both grasses. When sown alone about eight quarts of Timothy are required per acre. If sown with Clover, only about four or five quarts are needed per acre.

Good Timothy Seed Important

Good seed is an essential of success in farming Timothy. Don't buy a poor grade of Timothy Seed. Poor seed, besides being full of weeds, will not grow. Seed of poor germination may come up weakly and live, but produces few stalks of uncertain growth. The difference in cost of inferior Timothy and the better grades is so little that it is poor economy to buy the cheaper stuff always offered—a few cents per bushel less for a poor quality of seed may be costing you several tons of high-priced hay at "hay making."

Our Timothy Grades

"FARMERS' CHOICE"—always clean and of highest germination. It is made out of the cleanest and soundest seed that can be found in the market. We have been selling "Farmers' Choice" for years to the satisfaction of our growing trade—it is by far our best-selling grade—is moderately priced—and unexcelled for soundness. Sales are rapidly increasing each season on "Farmers' Choice." Less than one-fourth of the Timothy grown in America can be cleaned into "Farmers' Choice" quality.

OUR "SAFE" is a little below "Farmers' Choice." It is as its name indicates, Safe to Sow, being free of objectionable weed seeds and germination high. Will comply easily with any State's seed laws.

"NORTH-WEST" TIMOTHY is the most stylish seed you have ever seen. Plump in the berry, clean, beautiful in color—not necessarily cleaner or of higher germination than "Farmers' Choice." But "North-West" is the choicest selection of the seed grown in the States of the North Rocky Mountain district—produced in shorter seasons—hence slightly earlier—a bit more hardy—and to produce a somewhat ranker growth than the seed brought from the great Middle West. The supply of "North-West" Timothy in our warehouse at this writing has a purity test of 99.80%, absolutely free of dangerous weed seeds. The supply of "North-West" Timothy is rather limited. If you happen to order when our stocks of it have been sold we will take the liberty to substitute "Farmers' Choice" and will refund you the difference in cost.

Prices of Timothy vary all through the season, so we cannot print them into our catalogue. We handle immense quantities and are always willing to give you benefit of close quotations based on market conditions.

In comparing our prices of grass seeds do not overlook our "Bags Free" and "Freight Paid" Offers.

Permanent Mixture for Hay and Pasture



Hay Grown From Our Permanent Hay and Pasture Mixture

The right grasses—from 12 to 16 in number—in the right proportions are used to make up these mixtures. The highest authorities have been consulted and our practical experience followed. Varieties are used that will make a succession of grasses to be cut or pastured the first season. If the seed is sown carefully, under reasonably good conditions, pasturing may begin early in the Summer and last until late Fall. If the sowing is for hay several cuttings may be made during the first season. A large proportion of the grasses used are of a permanent nature and a field once firmly established will last for many years. These mixtures are recommended for either Spring or Fall sowing, 30 to 35 lbs. per acre. Two mixtures are made—one for well-drained upland sowing, which is called Highland Mixture—the other for lowland meadows, which is called Lowland Mixture.

There are farms in every community that have land—now left idle because of difficulty in farming—too rocky, too steep, too small or too wet to be farmed in the regular rotation; that if sown to one of our mixtures could be made to produce hay or pasture in profitable quantity for many years. Now that hay has become so high in value it is wasteful not to put these areas of land to work producing either hay or pasture. Price—See Price List.

MISCELLANEOUS GRASS SEEDS

Red Top. This is a valuable grass for either hay or pasture. May be sown either Spring or Fall. Grows slowly in the Spring and ripens with timothy. It is a strong grass. Does not die out. When once well started will spread and supplant other grasses. It, however, is not hard to destroy when it is necessary to plow land for other crops. It succeeds well in any soil and is particularly well adapted for low moist lands. Red Top Seed is sold both solid and in the chaff. Sow 8 to 10 lbs. per acre of solid seed or 20 to 30 lbs. in the chaff. The heavy seed weighs 30 lbs. per bushel. The light seed weighs 14 lbs. per bushel.

For several years Solid Red Top Seed has been scarce and high. Now bright, heavy seed is available at prices not more than half as high as a few years ago. Under these circumstances we recommend seeding heavy seed rather than resorting to the lighter unhulled. We have farmers who prefer Red Top to Timothy as a producer of either hay or pasture. It is a very valuable grass both for seeding alone or to seed along with Timothy, Clover or other grasses. With low-priced good seed available—this is the year to give it trial. See Price List.

Kentucky Blue Grass. This fine-bladed, rich green, nourishing grass may be sown in the Spring or Fall. It grows most rapidly in cool weather, but withstands the effects of the greatest heat. Kentucky Blue Grass does not grow as rapidly as some other grasses, but when once started makes the finest pasture. It is one of the best grasses for lawn mixtures and for other hay and pasture mixtures. On limestone soils the finest lawns can be started with Kentucky Blue Grass alone; however, we prefer our Lawn Grass Mixture for lawn purposes and for hay or pasture purposes we advocate that other quicker growing grasses be sown with it. We have beautiful, heavy Kentucky Blue Grass to fill our orders this Spring and the price is low, which should induce its more liberal use. See Price List.

Orchard Grass. This is one of the best grasses. It is valuable both for hay and pasture. It is very succulent and nourishing and is more leafy and of greater length than most other grasses. Orchard Grass grows quickly, and bears close cutting and close pasturing. It begins its growth early in the Spring and continues right up till late Fall. It will last for years without the necessity of re-sowing. May be sown either in the Spring or Fall on any kind of soil that is not actually covered with water. Two bushels are required to sow an acre. Prices—See Price List.

Canada Blue Grass. Very much like the Kentucky except that it is coarser, grows a little more rapidly—good for hay and pasture, but not so desirable for lawns. Price—See Price List.

Meadow Fescue. Another perennial of much value. Sometimes called English Blue Grass, but it is not at all like our Kentucky or Canada Blue Grass. Meadow Fescue grows two feet tall—thrives anywhere in the North. Yields abundantly of either hay or pasture. Suitable for mixtures. Is relished by stock. Does well on wet soils. Keeps growing well into Winter. Sow either Spring or Fall, fifty pounds per acre if sown alone. See Price List.

English Rye Grass. Also sold under the more general name of Perennial Rye Grass. Is an extremely valuable grass that makes a rapid growth. Adapted to all soils. May be sown either Spring or Fall. Is a good one for mixtures. Does well with Orchard Grass. When sown alone 30 to 40 lbs. per acre is required. Prices—See Price List.

Bromus Inermis. This grass came originally from Russia. It is now grown largely in the West, where it has become one of the most popular grasses. It is a perennial grass that will stand for years on the same ground without renewing. It wants a rich soil for best results. May be sown from early Spring to late Fall. It withstands heat, drought and frost. It is alike valuable for pasture and hay. Both hay and pasture is greatly relished by cattle and all kinds of stock. It roots so deeply that it is enabled to thrive on the driest soils. It is a good one to sow with other grasses. Bromus Inermis is entitled by its many merits to more general use in the East. Sow two to three bushels per acre. It weighs 14 lbs. per bushel. Prices—See Price List.

Tall Meadow Oats Grass. Here is a tall rank grass that may be grown on soils that are inferior! It grows quickly and makes a good hay or pasture. It is hardy and will last for years without resowing. It is so deeply rooted that it will withstand drought of any length. This grass becomes green very early in the Spring and remains green late in the Fall. This grass should be more generally known, for it is certainly a valuable variety and worthy of the attention of the best farmers. It weighs from 11 to 14 lbs. per bushel. Sow from 2 to 3 bushels per acre. This is a valuable grass in mixtures. It is especially adapted to be sown with Orchard Grass, Red Top Clover and similar grasses. It is more expensive than the rye grasses, but really long living the most valuable on our list. Prices—See Price List.

Sow Hoffman's Lawn Grass Seed

Hoffman's Lawn Grass can be seeded with absolute assurance that you are seeding the best. It is composed of strictly clean, fine leaved grasses of highest quality. The most expensive grasses are included, and the mixture, if carefully seeded on well-prepared soil, will produce a most beautiful sward—even fine in texture—rich green in color. Lawns may be seeded at any time from Spring to Fall. Weather, however, is apt to be most favorable to seeding very early in the Spring or early in the Fall. One pound of seed will reach for two hundred square feet if soil is thoroughly pulverized and in mellow condition. When soil conditions are not strictly ideal, heavier seeding is advised. We advise that seed be raked in lightly so that it will be covered from one-fourth to one-half inch. After seeding, the soil should be pressed down firmly. Prices—See Price List.



Harvesting Sudan Grass

Sudan Grass

Comes from the African Sudan Country. It belongs to the Sorghum family. It is more like a grass than a corn. May be cut often for hay. It laughs at drought and will grow vigorously without any rain if once started. May be broadcasted, 16 pounds per acre, or planted in rows, three pounds per acre if three feet apart. Four to six pounds if rows are 18 to 24 inches apart. The rows should be as far apart as the tools available for cultivation will permit. See Price List.

MILLETS

Millets are grown largely in the West, but do not have a place in Eastern agriculture except occasionally when drought cuts short usual supplies of hay and forages. Millets may be sown in June, or even in July, and will rapidly grow into heavy crops.

Golden Millet (formerly called German). This variety grows quickly—is easily cured—is of fine texture of stems—makes nutritious hay. Sow 3 pecks to one bushel per acre for hay. Only 1 peck to grow seed. Should be cut while blooming—before seed hardens in the head. Sow Golden Millet with cow peas for a well-balanced, nourishing feed, 3 pecks Millet and 1 bushel cow peas per each acre. Cut when Millet is in bloom, regardless of maturity of the cow peas at that time. See Price List.

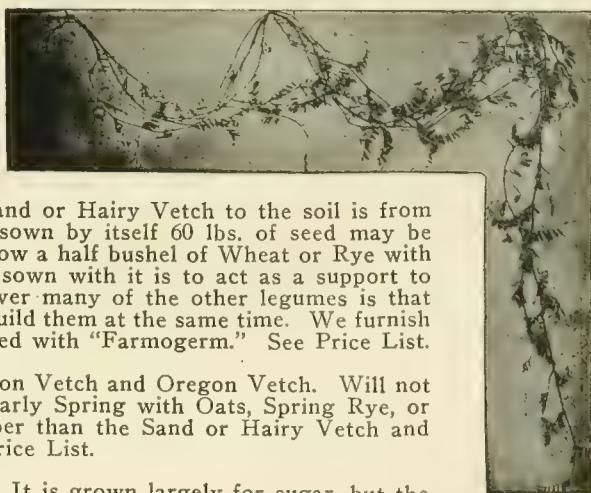
Japanese Millet grows taller and finer than either Hungarian or Golden. It will grow on the poorest soils and no location is too far North for it to thrive. Some seedsmen in the West sell Japanese Millet as "Million Dollar Grass." It is a wonderful grass on account of its rapid and tall growth and has its uses. Sow one-half bushel Japanese Millet per acre. See Price List.

Hungarian Millet is widely known and is a reliable sort. Sow three pecks per acre for hay and only a half bushel or less for seed production. See Price List.

Sow "Dwarf Essex Rape" for Quick Pasture

Fine for cattle, hogs, and sheep. Frequently sown in mixtures of Oats and Canada Peas. It grows thickly in from six to eight weeks. Sown into corn the last cultivation will make a good Fall pasture. May be sown Spring, Summer or Fall. When plowed under, the soil is greatly benefited. Rape will do well in any kind of soil and thrive under almost any conditions. It can be grown at such a small cost per acre that it should be more largely used. Sow 5 pounds per acre. See latest Price List.

Sand or Hairy Vetch. This is one of the most valuable friends of the farmer. It is valuable alike and at the same time for hay, pasture and for soil improvement. May be sown in the Spring or Fall. It is an annual, but it drops its seed freely and will renew itself and last for years. Various Experiment Stations



have claimed that the value of an acre of Sand or Hairy Vetch to the soil is from \$16 to \$48 in commercial fertilizer. When sown by itself 60 lbs. of seed may be sown per acre. It is, however, advisable to sow a half bushel of Wheat or Rye with about 50 lbs. of Vetch per acre. The grain sown with it is to act as a support to the Vetch. The advantages of this Vetch over many of the other legumes is that it will thrive in the most barren soils and buildup them at the same time. We furnish high-grade seed. Vetches should be inoculated with "Farmogerm." See Price List.

Spring Vetch. Known also as Common Vetch and Oregon Vetch. Will not survive our Northern winters. Is sown in early Spring with Oats, Spring Rye, or Spring Barley. Spring Vetch is much cheaper than the Sand or Hairy Vetch and must be sown a little heavier. See Latest Price List.

Sorghum is of the Sugar Cane family. It is grown largely for sugar, but the "Early Amber" listed by us is equally valuable for forage and may be grown in the United States. It is like corn in appearance. It may be cut two or three times in a season. It is excellent food, either dry or green, for cattle and live stock of all kinds. It stands drouth well and is a rapid grower. Has high feeding value. Plant in well-prepared soils. Don't plant until soil is warm. If you broadcast by hand, two bushels per acre is required on account of imperfect covering that follows. If drilled in, 1½ bushels per acre is sufficient. Plant one to two inches deep. Planting in rows like corn is best if you intend to cultivate several times. The seed should be one inch apart on the row and the rows just far enough apart to permit cultivation. By this last method, 10 to 20 pounds per acre is needed. Feed value of Sorghum is greatest if cut just before head appears. The younger it is cut the quicker will be the growth of the following crop.

"Early Amber" is earliest and most popular for forage. See Price List.

Cow Horn Turnips are grown for soil improvement along with Crimson Clover and alone in corn fields. Turnips are not legumes, but the Cow Horn variety reaches down into the sub-soil and brings up considerable fertilizer ingredients and adds them to the top soil. Besides this, the turnip improves its mechanical condition and adds considerable humus. The tops are eagerly eaten by sheep and poultry. The cost of growing is slight on account of ease of seeding and small amount of seed required. See Price List.

Plant of
Hairy
Vetch



MAINE GROWN SEED POTATOES

There is no other crop on the farm that will respond so well to the planting of High Grade seed as the Potato crop. The seed here offered you is truly High Grade seed stock. It has been selected from productive crops grown on ideal soil. Has been properly stored in a temperature warm enough to escape chilling and cold enough to prevent premature sprouting.

All of our stocks of Seed Potatoes were grown in Aroostook County, Maine. No other section has such an ideal soil or climate for Seed Potato production. The average yield of potatoes in this favored section is more than double that of other sections of the United States. Of all the Seed Potatoes used South of New York and East of the Mississippi River, 85 per cent. come from Maine. Our own experiences, and those of many of our customers, who purchase new Maine seed year after year, make us firm in our belief that Maine grown Seed Stock excels that from any other section. There is, however, a vast difference in the seed stock sent out from Maine, and our customers are warned against much of the stuff sold at ridiculously low prices. Those depending on our selections have been well paid for doing so. All of our stock is first class, produced by the best growers, who take every precaution to keep their crops rid of blight and other diseases.

The following essentials to economical and profitable potato culture might be interesting and helpful:

Sandy soils, gravelly soils, medium to light loamy soils, heavy soils if drained, are suitable for potato growing.

Deep plowing, at least 8 inches (10 inches is better) is essential for best results.

Thorough harrowing to mellow the soil, to warm it, to preserve the moisture, cutting in 7 inches deep with disk is advised.

Good Seed from the extreme North (preferably from Maine) is recommended.

Soaking the Seed 2 hours in 1 lb. formalin, diluted in 30 gallons of water, will prevent scab. Seed must be dried after treatment and before cutting or planting.

Large seed pieces preferred. One or two eyes. Each piece must have a good portion of flesh to sustain it until roots are started.

Commercial fertilizer preferred to manure. As much as a ton per acre permitted if same is worked into the soil and not allowed to contact with seed pieces.

Plant deep. 3 inches where early digging is the object. 4 to 5 inches if big crop is desired.

Plant 12 to 15 inches in row. Rows 3 feet apart. Machine planting is best and economical.

After planting, cultivate—cultivate—cultivate. Begin before potatoes are up, continue weekly if possible till vines are dead. Spray with Pyrox to kill pests and to prevent blight and other fungus diseases.

VARIETIES OF SEED POTATOES

We handle only the standard sorts which hardly need description. See Price List. We would warn our friends to be careful of the many new varieties offered at extraordinary prices. In most cases these are simply re-named potatoes of the old sorts—some of them without merit.

Irish Cobbler. The best selling variety. Fully one-half of our sales are of this sort. The Irish Cobbler is the earliest standard white potato. So well known that description might be omitted. It is round to oblong in shape. Eyes are rather shallow for an early sort. There is an indent at stem end of potato. The cluster of eyes at seed end is apt to be on the side of the end. These characteristics of the Cobbler will enable any one to identify it. The Cobbler is one of the best yielders. Given rich soil and proper fertilizer it will make extraordinary crops. The foliage is strong—branching—dark green. The eating qualities of the Cobbler cannot be excelled. It is quite mealy—not only when dug early, but when kept through the following winter. The Cobbler stores safely. Though it is an early sort, its eyes remain dormant as long as the later varieties under same conditions. The keeping qualities of the Cobbler has made this variety a suitable one for commercial planting. Summing up—the Cobbler is very early—cooks well—is mealy—beautiful in shape and color—stores safely—yields enormously. See Price List



Green Mountains. This is probably the best known standard sort grown. It is of highest eating qualities—round to oblong—white flesh—healthy grower—heavy foliage—good keeper, retaining its good eating qualities all through the winter. We have to offer this year fine stocks of an improved strain of this variety. Order your supply of them early. Sales are always heavy on this sort.

State of Maine. Another standard sort, well and favorably known—oblong in shape—large in size—prolific yielder—too well known to require lengthy description.

Sir Walter Raleigh and Carmen No. 3. These are two favorable sorts, very similar in manner of growth. Both blossom purple—grow round to oblong in shape—fine in eating qualities—heavy yielders—ripen in mid-season.

Early Rose. One of the oldest sorts that holds its popularity for earliness, yield, and eating qualities. The pink coloring in flesh shows plainly in our stocks.

Early Ohio. It is distinct in type, quite unlike any other sort—slightly pink in color—very early ripener—heavy producer. It is widely and favorably known as an early garden sort of much merit.

Our potatoes are all stored in Maine this season and will be brought down in heated cars the last half of March and distributed from Landisville. Usually, we can ship seed potatoes after March 20th, but if weather is too cold, shipments will be withheld.

Prices of Seed Potatoes Fluctuate wildly, so that it is impossible to print them into our catalog. We will follow the trend of the markets and quote closely. All potato quotations are for immediate acceptance. If you delay ordering, write for new prices.

Order Seed Potatoes Now to insure getting exactly what you want. We will hold same for you until weather permits shipment with safety from frost. Orders booked now require an advance payment of \$1 per sack—this is simply as evidence of good faith in the transaction. Balance of cost to be paid when you want shipment started in the spring. Orders for less quantities require \$1 per bushel advance payment. See Price List.



"Marquis"
Spring Wheat

SPRING AND SUMMER GRAINS

Marquis Spring Wheat (Beardless). We have been discouraging the growing of Spring Wheat, except in the higher portions of Pennsylvania and in the States to the North. We believe the "Marquis" variety will do further South. At least, we know this variety to have succeeded where other sorts of Spring Wheat have failed. "Marquis" Wheat has done well for years in the Winter wheat sections of Iowa and Kansas. One reason "Marquis" does better than other Spring varieties is that it is earlier by ten days than the others and not nearly as subject to rust and disease. "Marquis" makes a beautiful grain and is productive. Our "Marquis" seed comes from North Dakota, which means our seed, besides being pure and clean, has all the inherited tendencies of the Northwest—earliness—hardiness—productiveness. See Price List.

Spring Rye. This valuable rye is used to produce grain and is also used to sow with other grains for Spring pastures and soiling purposes, as well as for nurse crops. Spring Rye should be seeded early, same as oats, and will make fine crops. Seed should be brought from the North every few years, as seed produced here deteriorates from time to time. Spring Rye is not quite as plump in the grain as the Winter sort, but is just as valuable for all purposes. Our stock was secured directly from the grower in North Dakota, and is pure, clean, and true to name. See Price List.

Speltz or Emmer. The production of this grain in the United States is greatly increased each year. Speltz is adapted to a wide range of soil and climate. It resists almost any extreme of weather. It is excellent feed and makes heavy yields of grain. Will in time rank with the standard cereal crops of the world. Those who have not yet grown Speltz should try it upon at least a few acres of their farm.

Speltz is readily eaten by all kinds of stock—is especially adapted for feed to cows. Speltz should be mixed, however, with bran or shorts to give best results. Speltz is also valuable as a hog feed and may, too, be fed mixed with other feed to horses.

Speltz is a wonderful drought resister and proof against nearly all conditions that undo other cereals.

Sow 2 bushels Speltz per acre—and handle the crop all through about the same as you handle Oats. Fine stocks of new crop Speltz ready for your orders. See Price List.

FACTS ABOUT SPELTZ

- It resists drought. Ripens very early.
- It thrives on poor land, stony ground, in forests.
- It makes a crop with almost any condition of soil or climate.
- Endures a great deal of frost.
- Is not readily damaged by harvest rains.
- Does not yield to rust or smut.
- Yields as well as Oats, Rye, Wheat, or Barley.
- Makes better feed than Barley.
- Stock readily eat both grain and straw.



Speltz or Emmer

Manschury Barley (Bearded) will do well anywhere from the Canadian border to the States far South. In the Eastern and more Southern States it will deteriorate unless seed is brought from the North. It will do well on land too poor for other crops. Two bushels should be seeded per acre. It will yield double as much as wheat and the grain is valuable for all kinds of stock. It should be sown early as oats, if possible, for best results, but barley will stand late planting much better than oats. We have secured North Dakota grown barley for our trade of the "Manschury" variety. This is a bearded variety that leads other varieties in feeding values and yielding qualities. It is early, does not lodge. Try a few acres of "Manschury" Barley. See Price List.

Beardless Spring Barley yields well, though not quite equal to the bearded sorts. Beardless Barley Seed should be brought from the North to get best results. Beardless Barley is, of course, free from the objectionable beards that are so troublesome in harvesting and threshing. Beardless Barley is much safer to feed in the straw to live stock than Bearded Barley which must be threshed. It is a fine grain to mix with other seeds for soiling or hay and is also a fine grain to use as a nurse crop for Alfalfa, etc.

We especially recommend that Alfalfa be started with Beardless Spring Barley as a nurse crop whenever Alfalfa is started in the Spring months. We recommend sowing three-fourths of a bushel of Beardless Spring Barley as a nurse crop per each acre of Alfalfa. This will produce a half crop of grain at harvest time when the Barley should be harvested. Do not use more than three-fourths bushel per acre when planting to nurse Alfalfa.

For a full crop of Barley sow 2 to $2\frac{1}{2}$ bushels per acre.

Our seed this season was procured in Michigan, from a reliable party, and we believe our stock is true Beardless Barley. The grain of beardless has the same value for feeding as the bearded varieties. Barley is good feed for cattle, hogs, and poultry. See Price List.



Bearded Barley
use more than three-
or four pounds

Summer Pasture Mixture (Annual) T A R

This mixture of quick growing seeds will meet the demands of farmers who want to grow quickly, with little labor and expense, green feed for farm stock. It should be planted at the rate of 70 pounds per acre. It can be broadcasted by hand or with a seeder, and harrowed in. It can also be drilled with a grain drill.

A satisfactory pasture for hogs or sheep in 4 weeks of favorable weather. For cattle it would be best to cut the growth and haul to the cattle either in the stable or in pens, to prevent damage from stamping. After the growth has been cut off and pastured down, the field will quickly make another growth if given a chance. The feed grown from this mixture is of a succulent nature that will contribute largely to the production of flesh, fat, wool, and dairy products. Must not be sown before June 1st and not later than August 1st. The growth will continue until frost, but will not stand the winters.

Japanese Buckwheat. The standard and most popular variety of Buckwheat—a sure "catch" crop. May be sown where other crops have failed or where hardly anything else will grow. Besides producing heavy crops on poor soils, it must be remembered that Buckwheat is not hard on land.

May be seeded all of June and first half of July. Only one bushel of seed per acre is needed. Yield in grain and straw is heavy, even on thin soils. Buckwheat flour is very valuable human food. Buckwheat middlings have high protein content, and is in much demand for dairy feed. Buckwheat in the grain is an attractive poultry feed. See Price List.

Silver Hull Buckwheat. Enjoys with the Japanese variety a world-wide reputation. The grain is of a beautiful gray and has a thin husk. Millers like Silver Hull, as it makes a white flour and leaves little waste. A favorite variety for bees. See [Price List](#).

SEED OATS

The country's oats crop in 1918 was satisfactory in size, but not of high average quality. Our search through leading oats-producing sections has revealed that the oats in general is not of as bright color as in good oats years. Some lots show low in germination. Some sections appear to have had trouble in oats ripening, as samples examined show many greenish grains. On examination of these, they are found to contain shriveled, immature kernels, and to be of weak germinating qualities.

Realizing that our customers depend on us for good seed oats, no matter how difficult it is to procure them, we have searched every oat-growing section and have succeeded in being able to offer the trade the very best seed oats to be had. Our list embraces a few rare varieties of striking value, together with the standard tried kinds. These we offer in qualities that will please, and at prices that are attractive. Hoffman's Seed Oats can be relied upon for both high germination and for merit of variety.

Special attention is called to the Climax variety. Besides being a very reliable yielder, its traits of tall, stiff straw—good heavy grain of thin husk and plump kernel—its rust-resisting qualities—make this Climax variety commend itself for your use where a good crop of highest food-value oats is the aim. Sow a part of your oats ground, at least, with the Climax variety of seed, and we warrant you will be well pleased with results. Picture on this page shows grains (actual size) and sheaves of these Climax oats.

RATES OF SEEDING OATS

Given a good seed bed and a productive soil, $2\frac{1}{2}$ to 3 bushels of Oats by weight are sufficient to seed an acre of any ordinary variety, if drilled. On thin land slightly heavier seeding is advisable. Small kernel varieties need not be sown so heavily.

Hand seeding is wasteful. Drill seeding is uniform as to depth. Sow one-half to one inch deep in moist soils—deeper in dry soils.

Sow early, very early, just as early as the ground can be prepared. Nothing gained sowing early on ground not properly prepared.

Prices of Seed Oats

See Price List for quotations. When consulting same, please consider that both the cost of bags and the value of our Freight Paid Offers are figured into the prices. These are expensive items nowadays.

Order seed oats only in multiples of $\frac{1}{2}$ bushel—2, $2\frac{1}{2}$, 3, $3\frac{1}{2}$, 4, $4\frac{1}{2}$ bushels, etc. Not less than 2 bushels sold. High bag-cost prohibits smaller orders.

"CLIMAX" VARIETY

Large—Bright Grain—“Tree” or “Sprangle” Type—Weighs—46 lbs. to Measured Bushel

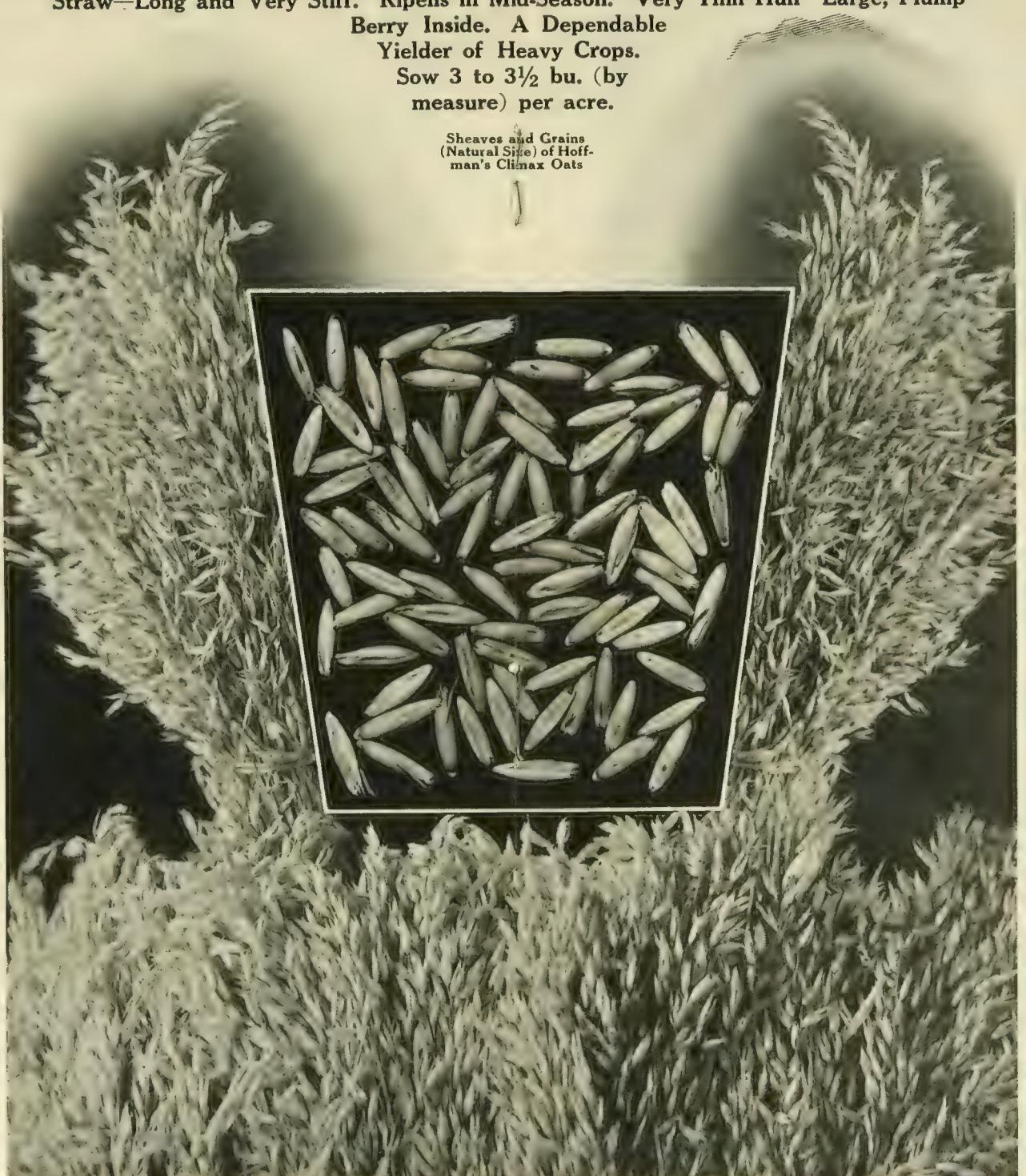
Straw—Long and Very Stiff. Ripens in Mid-Season. Very Thin Hull—Large, Plump

Berry Inside. A Dependable

Yielder of Heavy Crops.

Sow 3 to $3\frac{1}{2}$ bu. (by measure) per acre.

Sheaves and Grains (Natural Size) of Hoffman's Climax Oats



The "Climax" variety of seed oats is no new, untried kind. It has been yielding good crops of grain season after season. Yields of over 100 bushels to the acre have been secured by growers of this variety. During the past season several have gotten upwards of 80 bushels per acre from Climax oats.

Climax is a genuine "tree" or "branching" variety—the result of careful selections and breedings from the old Swedish type of oats. Thorough attention has been given by its producers to the breeding of a heavy grain, with thin hull and a large plump kernel inside. And this has been very well accomplished.

In 1916 and 1917 Hoffman's catalog offered "Shadeland" Climax seed oats—produced in the famous Shadeland Valleys of Oregon—never was there better or prettier seed oats offered here in the East. Demand for them was enormous. Neither year did stocks reach. In the summer of 1917 this Shadeland Valley suffered from severe drought—some oats crops grew only a foot tall, some were never cut; 1918 was also an unfavorable oats season in Oregon. Crop is again extremely light—producers of the Climax variety out there have need of all their crops for re-seeding purposes in their own State—none will be shipped out. However, our buyer has this year located a two-car lot of "Climax" grown further East—in the Middle West—where oats were making record crops in 1918. This lot of seed

Weighs 46 lbs. per Measured Bushel

We claim our trade fortunate in being able to secure seed of this variety this year. We know the demand for it will be very strong. It is a very worthy variety. Every year we have known this type, it has been producing good heavy kernels. Climax differs from many oats offered. When the hull is removed it is found to be practically all kernel, very thin hull. That is a quality in which so many varieties are lacking. For feeding purposes, you want the inside, and not the hull, and in Climax oats your wants will be fulfilled. For thin-skinned, heavy oats, and for a variety that will produce for you a uniformly heavy crop with these qualities year after year, Climax cannot be excelled. Its

Tall, Stiff Straw

has well proven its ability to carry its load of grain through severe storms—and this characteristic of Climax is certainly most desirable.

A great rust-resisting sort. No oats have yet been produced that is not apt to be somewhat affected by ravages of rust. Yet Climax is as near being a rust-proof variety as is grown throughout the great Middle West.

If your scheme of crop rotation includes oats, don't pass the chance of seeding at least 5 or 10 acres to Climax Tree Oats. Compare results with any other sort you put out, and see if you don't wish next harvest that more acreage had been devoted to Climax Seed.

Don't Wait to Order Climax

When present stock of this variety is all sold—we can't get any more of them. Demand will be heavy, and we urge you to place your order very early—far in advance of seed time. Prices—see Price List. Note that all prices on the list include bags necessary to ship seed, and that Freight Paid Offers also apply.



Improved White Russian Oats (Side Oats)

Here is a genuine Side or Horse Mane type of Oats—grows its grain to one side of the stem—similar to the growth of a horse's mane. Side Oats have many friends in Pennsylvania, New Jersey, Ohio and other adjoining States. Some folks will sow nothing but a side type of oats.

This supply we offer you comes direct to us from a 40,000 acre seed-farm in North Dakota. Grown especially for seed purposes. No other kind of oats has been grown on this farm for nine years. Their threshing rigs have never threshed any other variety of oats. The parent seed for this crop was specially selected and certified stock. Every precaution is thus taken to keep the variety especially pure and free from other kinds of oats.

One of the most noticeable features of the variety is the extremely thin hull it grows, and the large berry this thin husk encloses. First appearance of the grain is that it is not extremely large. But removing the hull one finds an unusually large grain, well filled and plump—a variety with more feeding value per bushel than most other oats. The "Improved White Russian," because of its large berry—thin husk—weighs heavy. Our tests of weight show 40 to 43 lbs. per stroked bushel—unclipped, carefully milled, and very clean. Like every other variety of oats, "White Russian" is not rust proof, but this variety has suffered scarcely any alongside of other sorts that were nearly destroyed. The straw is very stiff—stands up remarkably. On the level prairie lands of the Dakotas, where storms have full sway, "Improved White Russian" stands up very well. Matures early.

Now about yield. "Improved White Russian" stands right at the front among heavy yielding types. Crops of 100 bushels per acre on large tracts are not uncommon. We believe that "Improved White Russian" is entitled to first place as a heavy yielder among the side types of oats, and confidently recommend it to our customers. Past years have proven that seed oats brought from this far North section and planted in regions further South, bring along a degree of hardiness and yielding ability that is not surpassed by locally-grown seed, or that from other sections.

These oats are offered closely as to price. We must pay a large premium for these real side oats. And the cost of freighting cars of them here from this far-away section is enormous. It is impossible to sell them as low in price as oats grown further East. If you like a side oats, we know you will like "White Russian." Even though the cost runs just a little higher per acre, you have the genuine side oats, and a variety whose yielding abilities will please and pay you. See Price List. Order only in multiples of $\frac{1}{2}$ bushel—2, $2\frac{1}{2}$, 3, $3\frac{1}{2}$, 4, $4\frac{1}{2}$ bushels, etc. Not less than 2 bushels sold. High cost of bags prohibits smaller orders.

“Bumper Crop” Oats

“Bumper Crop” continues to be a favorite variety of oats. We like “Bumper Crop Oats” for the many friends and customers it has made for us. Our customers like it for the money it has made for them. Many who purchased this type from us in past seasons have sold off good parts of their crops as seed to their neighbors. A field of Bumper Crop is surely an attractive sight—long, compact heads, beautiful clusters—and when harvested will thresh out big crops of very large-berry oats.



Head of Bumper Crop Oats

The formation of the heads of Bumper Crop is such that the variety cannot be classed as a side oats or as a branching type. There are no branches, the seeds being all formed along the main stem—but unlike the side oats, the grain surrounds the stem. (Note picture.)

The Bumper Crop variety was started from a single head of oats discovered by a Mr. Detmer, of Ohio, several years ago. He noticed this one stalk standing up like a sentinel in the midst of a field of oats that was lodged flat. He examined this stalk closely—saved the head, and planted the seed it contained. He found the straw very, very stiff. After many seasons of careful handling of this oats, Mr. Detmer succeeded in producing for the market this “Bumper Crop” variety of seed oats. It has retained all of its stiffness of straw—the main stem being very thick-walled—in some cases as thick as a lead pencil. The leaves are one-half inch to an inch wide. The grain is indeed beautiful—large, white and well-filled. This variety was given the right name—it is surely capable of Bumper Crops. The yielding abilities have been proven time and time again. One instance showed a yield of $84\frac{1}{2}$ bushels per acre, alongside of other standard sorts that showed only 50 bushels. Bumper Crop is an exceptional stouter—unequalled for its rugged hardiness. See Price List. Order only in multiples of $\frac{1}{2}$ bushel—2, $2\frac{1}{2}$, 3, $3\frac{1}{2}$, 4, $4\frac{1}{2}$ bushels, etc. Not less than 2 bushels sold.

“Silver Mine” Oats

This is a standard sort that yields big crops of fine oats. The kernels are remarkably white and the hulls so thin that manufacturers of rolled oats are very partial to “Silver Mine.” The heads are of the sprangle type and very long, starting low down on the stalk. This tendency prevents lodging easily. “Silver Mine” Oats are early. This, together with other favorable tendencies, makes “Silver Mine” a fine variety to plant mixed with Canada Peas for early crops of feed for either hay or soiling. Farmers who feed oats in the sheaf, straw included, claim that the soft hulls, large grains and clean straw of the “Silver Mine” make it palatable. See Price List. Order only in multiples of $\frac{1}{2}$ bushel—2, $2\frac{1}{2}$, 3, $3\frac{1}{2}$, 4, $4\frac{1}{2}$ bushels, etc. Not less than 2 bushels sold. High cost of bags makes smaller orders prohibitive.

“Peerless” Oats

This will be the third year for the Peerless variety in our catalog. Have received some very good reports from users of this oats. It is a kind of oats at a moderate price for those who want something good at a figure just a little above the cost of feed oats. This is heavy seed—of good color—clean—free from weed seeds—strong in germination. It will please. We have only a limited quantity. Purchased our stock at a good figure,

and are offering them to the trade at a price that gives them the benefit of this purchase. These are regular tree oats—ripen in mid-season—stand up well—yield heavily—a great all-round desirable variety. The stock we offer was grown in Michigan. See price list for quotations. When consulting same, please consider that both the cost of bags, and the value of our Freight Paid Offers, are figured into the price. On account of the high prices of bags, not less than 3 bushels of "Peerless" will be sold. Orders must be in whole numbers of bushels, such as 5, 6, 7, 8, etc.



Genuine "Swedish Select" Oats

Our stock of Swedish Select Oats comes from a grower who makes a business of growing oats for seed, and the stock is heavy, sound, first-class in every respect.

This valuable variety was brought to this country from Russia, by the Department of Agriculture, in 1899. It at once became popular because of its heavy yields and other desirable characteristics. It is early, has a stiff straw that prevents lodging, and is a branching variety. A few years after its introduction to this country, Mr. G. A. Garton took it to England, and there under his care and breeding so improved it that when it was again sown in this country it showed even greater yields than when first brought from Russia.

The Bureau of Plant Industry of the Department of Agriculture at Washington, in an official bulletin, says of this variety: "It has been shown that the ten-year average yield of this oats at the Wisconsin Experiment Station was eight and one-half bushels per acre greater than the average of all other varieties."

A characteristic of "Swedish Select" Oats is its great root development. This gives this variety power to carry it through with big yields on almost any kind of soils or under any conditions. Customers having high, dry situations or clay-loam soils on which other varieties have not succeeded will do well by sowing this popular variety.

"Swedish Select" is grown with success in almost every section where oats is grown on a commercial scale. Farmers who want a branching variety of well tried reliable kind can safely put their trust in "Swedish Select," regardless of the acreage they plan to put out. We advise sowing 3 bushels per acre.

See Latest Price List. Order in multiples of $\frac{1}{2}$ -bushel—2, $2\frac{1}{2}$, 3, $3\frac{1}{2}$, 4, $4\frac{1}{2}$ bushels, etc. Not less than 2 bushels sold.

CANADA FIELD PEAS

Large dairymen and stock feeders are using Canada Peas extensively each Spring for purposes of hay, soiling, and pasture. Yet the great advantage of plant for early feed production is only known to a small proportion of those who should each Spring plant Canada Peas, either alone or mixed with oats.

Canada Peas are a cool weather plant and one of the earliest that may be put out with safety in the Spring. Just as soon as the frost is out of the ground and the soil can be fitted you can plant your Canada Peas.



Canada Field Peas and Oats

The Growth is Early, Rapid, Vigorous

In a very short time after planting the ground is covered with green. The most popular method among dairymen is to plant Canada Peas with an early variety of oats, the planting to be done early as possible, $1\frac{1}{4}$ bushels of Canada Peas with the same quantity of oats. Peas and oats may be mixed and sowed together. However, careful dairymen sow each separately and claim surer results for their trouble. The Peas should be drilled first 3 to $3\frac{1}{2}$ inches deep. Then the oats should be drilled $1\frac{1}{2}$ to 2 inches deep. The deeper planting of the Peas will protect the latter in case very dry Spring weather is met with. If Peas are planted alone $2\frac{1}{2}$ bushels are required, if drilled; 3 bushels if broadcasted and harrowed in.

The growth of Peas planted alone is upright for a time, after which it falls and completes its growth in a prostrate position. It is because of this habit that it is preferable to plant with oats, which serves to support the vines and makes the crop more palatable and more accessible.

Canada Peas make an abundant pasture for hogs, sheep and cattle. However, it is wasteful to feed in this way, as trampling by stock destroys much of the growth. The most economical way is to let the growth become tall, when the mixture of Oats and Peas should be mowed and either fed green or made into hay. The cuttings should take place when the Oats is comparatively green and the Peas have begun to form pods. This makes the very finest hay, or if fed green the very best fodder that can be offered to any kind of live stock. After this cutting a new growth will be made that may either be turned under with the plow or pastured.

The Canada Pea part of the hay is rich in protein and contains the other ingredients of Cow Pea and Soy Bean fodder. There is no other method of producing so quickly a growth of such valuable feed in the forepart of the Summer as with Canada Peas and Oats. The practice should be more generally followed. Besides its feed value—

Nitrogen is gathered in sufficient quantity for its own growth and leaves deposits in the soil for the benefit of the crops to follow.

It pays to "Farmogerm" Canada Peas (see page 32), though same may be grown successfully without artificial inoculation.

Canada Peas are a Legume

American Grown Seed is Preferred for planting. Though the American seed is limited this season, we have on hand large stocks of No. 1 stock, high in germination that were grown in the Northern part of Michigan which is noted for its fine seed peas. See Price List.

The Right Variety of Oats should be sown with Canada Peas. We recommend strongly "Peerless" Oats and the "Silver Mine" varieties for this purpose. Both these sorts are early—not too thick-walled, and yet strong enough to support the pea vines. See Oats Section of catalog for description and Price List for quotations.

Canada Peas and Oats Mixed are a decidedly profitable crop from every point of view. We urge our customers, not now familiar with them, to give same a trial. Arrange your plans early so you can sow early. Get your seed at once.



Soy Beans and Corn for Silage

SOY BEANS

Protein feeds—such as Cotton Seed Meal, Bran, etc., have become so expensive and hard to procure, that stock-feeding farmers have had to look to other sources for their supply of protein. Fortunately, they have found a cheap and a good substitute. This is Soy Beans. Rich in protein, easy to start and to grow, this crop is economically taking the place of the high-priced feeds.

Rich soil is not required to grow Soy Beans—every farm can produce them. As a means of enriching rundown farms quickly, the Soy Bean, and its close relation, the Cow Pea, cannot be matched. This Soy Bean is a legume plant—can be grown on poor land—land that is too poor to grow Clover or Alfalfa. Soy Beans gather nitrogen at the roots, and thus increase the fertility of the soil.

The farmer who produces beef, pork, mutton, milk, will eventually grow Soy Beans. The quicker he begins to grow them, the less he will lose by his delay in getting started. We have not the space to bring out in full the possibilities of Soy Beans, so quote brief facts below:

Our Stocks of Soy Beans include the very best varieties—all of them grown in the North (excepting the Mammoth Yellows which will not mature hereabouts—they were grown in North Carolina). We don't list a lot of new sorts. Really, many of the new sorts offered are only the old kinds renamed. Our stocks are all pure, clean, and of strong vigorous germination. Let us supply the Soy Beans you will plant this summer—and you will be pleased with results from them.

Add Soy Beans to your Silage. One part Soy Bean growth to four parts Corn will make of your Silage a perfect ration. The Soy Bean Plant will supply the Protein that the Corn lacks. You can grow the Soy Beans right in the same row as the Silage Corn, or plant the Soys separately.

FACTS ABOUT SOY BEANS

Soy Beans have a higher protein content than oil meal, pound for pound.

You can grow 20 to 30 bushels Soy Beans per acre on poor ground.

One bushel Soy Beans contains as much digestible protein and as much digestible fat as six bushels of oats, or four bushels of corn meal, or six bushels corn and cob meal.

Ground Soy Beans are greedily eaten by all stock, are easily digested, have a tonic effect whether fed by itself or mixed with other feed.

Soy Bean hay cut before beans have ripened is greater in value of protein and fats than Alfalfa hay.

Soy Bean straw and hulls, from which the ripe beans have been threshed, is equal in value of protein and fat content to Clover hay. Fed to cows will cause an increase flow of milk.

Soy Bean will make two to four tons of hay per acre.

Soy Beans cut green and packed with corn for silage—1 part Soys to 3 parts Corn, will make a perfect ration of much more value than corn silage alone.

A handful Soys fed to horses each meal will keep hair and hide in perfect condition.

Colts, sheep and stock can be wintered on Soy Bean hay alone.

The unthreshed vines fed to hens will bring about early and sustained winter egg production.

Corn and Soys grown together can be hogged down with convenience and profit.

An acre of Soys will produce as much meat as two acres of corn.

Soys can be grown on land too poor and too acid to produce Clover.

Soys are a legume and gather nitrogen from the air. Your soil will improve while producing crops of valuable feed. There is nothing better to plow under for rapid soil enrichment.

Planted in corn, Soys will aid the corn crop rather than curtail it. The nitrogen gathered by the Soys becomes available to the corn.

Wheat following Soys yields 20 to 50 per cent. better than when it follows oats.

Read "How to Grow Soy Beans"—also Varieties. Next two pages.

HOW TO GROW SOY BEANS



Soy Beans

Growing Soys needs little more attention than growing the old standard crops and not nearly as difficult to grow as Alfalfa. We give the following directions:

1. PREPARE YOUR SOIL WELL—just as you should for corn. Try to kill the weeds—especially if you are going to broadcast instead of plant in rows. Frequent cultivation in advance of planting season will accomplish weed killing.

2. DON'T PLANT TOO EARLY. The soil must be warm. A week or ten days after ideal conditions for corn is usually the safe time. Soys will rot in cold, wet soil, but will grow quickly in a warm seed bed. Planting Soys is permissible until early July, other conditions being favorable.

3. DON'T PLANT DEEP. $1\frac{1}{2}$ inches is nearer right than any other depth. One inch may do and two inches does not mean failure.

4. INOCULATION. To get the full benefit from growing Soy Beans you must inoculate the seed. The gathering of nitrogen from the air by the roots will not take place unless you supply the germ to start the action. Soil from another Soy Bean field may be used. It is, however, most certain and more economical to use commercial inoculation for the purpose. We believe "Farmogerm" to be the best inoculation in the market and we highly recommend it. See page 32. "Farmogerm" is applied right to the seed before it is planted. It takes only a few minutes and the process is simple. The nitrogen gathered from the air and deposited in the soil in excess of the plant's requirement is worth every bit of expense connected with growing Soy Beans, so that the top growth of hay and beans with their high percentages of protein is clear profit.

5. PLANT EITHER IN ROWS OR BROADCAST. If you broadcast by hand and work in with a harrow, $1\frac{1}{2}$ bushels are required. If drilled in with a drill with all holes open, $1\frac{1}{4}$ bushels are sufficient. You must be sure to kill weeds ahead of planting time if you broadcast. As a rule, planting in rows is preferable, whether you want to grow the beans or produce hay, green fodder, silage, or if you want to turn under for soil improvement. Planting in rows saves seed and permits cultivation. You will have to cultivate as often as you do corn. Plantings are made with rows 20 to 36 inches apart and two to three inches apart on the row. Twenty to thirty pounds per acre needed by this method, depending upon exact width of rows apart and upon size of variety of Soy. The most successful Soy men we know grow in rows as close as twenty inches apart. You must plan your method of cultivation in connection with width of rows.

6. HOW TO PLANT THEM. Nearly every corn planter can be adapted to plant Soys by getting a special disc. Grain drills, however, are used more frequently. A nine-hole or a twelve-hole can easily be adapted for rapid work by plugging two out of every three holes. A nine-hole drill will plant three rows at a time. A twelve-hole drill will plant four rows at a time.

7. HARVESTING. To make good Soy Bean hay—cut when half the pods are full grown and when top leaves begin to turn yellow. Cut them when there is no dew. Let lie in swaths until leaves are wilted but not brittle. Rake early in windrows but let them thoroughly cure for several days. Then put them in small cocks and allow several more days. Prevent loss of leaves as far as possible.

8. FOR BEANS. Let stand until half of the pods are dry and most of the leaves have fallen off. Same may then be handled as advised above for hay. The old self rake is used by some for cutting. It gathers the stalks in convenient open bunches and permits gathering with but a slight loss from shattering. Haul to the barn or stack.

9. THRESHING. This may be done by flail or by grain threshers. If the Soy Beans are for seed, care must be taken not to crack or split them. The removal of the concaves in the grain threshers is necessary.



Field of Wilson Black Soy Beans

Varieties of Soy Beans described on next pages.

Wilson Blacks. This is deservedly the most popular Soy Bean. It is one of the very few varieties that can be used for every purpose. It is one of the best for hay and bean production and for the silo. On account of its wonderful growth and slender stems and branches the "Wilson" variety makes the finest hay. On poor ground Wilsons will grow four feet tall and on fertile ground they attain a height of six feet. We think Wilsons will make a little more hay and a little better hay than any other Soy. Wilsons are early enough to mature beans in Pennsylvania, Ohio, New Jersey, and States to the South. The "Wilson" will do well on poor soils. We would give it good soils to produce forage—poor soils to produce beans. The "Wilson" is a little, jet black bean, appearing more like a bean and less like a pea than other Soy varieties.

"Wilson" Soys yield easily 20 bushels per acre; 30 bushel yields have been secured. Beginners who are not sure as to the variety to start with will do well to decide on the "Wilson." It is a great variety for hay, forage, soiling, silage, and green manuring. For price see Price List.

Ito Sans. This is a yellow seed variety. The old "Ito Sans" were not tall enough for hay, though the hay made from the "Ito Sans" was fine as to quality. The Johnson Brothers' "Ito Sans" have been improved as to growth and habit. "Ito Sans" as offered by us grow taller, and the habit of the old "Ito Sans" to cling close to the ground have been largely overcome by years of seed selection on the Johnson Brothers' Farms. "Ito Sans" are early. The beans will mature in the high altitudes of Pennsylvania and in the states of New York and Michigan. "Ito Sans" yield heavily of beans and we recommend them highly for bean production. The straw after beans have been threshed out has fine stems and is equal to Clover hay in value. A great Soy to farm for beans here in the North but not the best when hay production is the first object. See Price List.

Medium Green is another great double-purpose Soy Bean for the North. If planted early, beans will mature even in Northern Pennsylvania and Ohio and New Jersey. Our "Medium Greens" have been greatly improved by the Johnson Brothers, who grow them successfully in Northern Ohio. (Note importance of securing Medium Green Seed from this Northern section.) The old "Medium Green" shattered badly. This has been largely overcome by the Johnson Brothers as the result of years of careful selection. The improved "Medium Green" as offered here has been improved as to height and now grows as tall as four feet eight inches. See Price List.



Harvesting Soy Beans



Wilson Blacks Soy Beans

Early Brown. This is an early sort, suitable for late planting. It is a double-purpose sort, producing fine top growth and an abundance of beans. Will do well as a catch crop. If planted early in Pennsylvania or Ohio or New Jersey it can be removed in time to grow wheat. See Price List.

"Mammoth Yellow" will not mature beans in Pennsylvania or Ohio. It is largely grown in the South where heavy crops of beans are yielded. It may be grown on soils so barren that other plants will die for want of fertility. "Mammoth Yellows" make a very tall, coarse growth. This makes them valuable for Northern Culture to plant with corn for silage or to plant expressly to plow under for soil improvement. See Price List.

Mixed Soy Beans. We are oftentimes able to purchase small lots of Soy Beans that do not run strictly pure as to variety. These are then blended, and make up our "Mixed Soy Beans." For planting as a cover crop to turn under, these mixed Soys will serve you very well. Will also save you a little money. They are of first-class quality—just as strong in germination as any of the straight varieties.

COW PEAS

The Cow Pea is a valuable legume and very much like the Soy Bean in its relation to agriculture. The actual Cow Pea is nearly as valuable a feed as the Soy Bean, and Cow Pea hay is equal to Soy Bean hay in value of its fats and protein. Both Cow Peas and Soy Beans are great gatherers of nitrogen when properly inoculated and therefore great soil improvers. Even when all the growth of Cow Peas above ground is removed, the soil that yielded the crop is richer than before the Cow Peas were grown. Except as herein noted, all the statements on previous pages under head of "Facts About Soy Beans" are equally applicable to Cow Peas. Cow Peas can be grown on poorer ground even than Soy Beans. Cow Peas as a class are more recumbent than Soy Beans, and therefore more difficult to harvest. However, we offer varieties that have upright tendencies. For pasturing or hogging or for turning under for soil improvement the trailing habit is no objection.

Instructions for Growing Cow Peas

As a whole, the same methods are employed for Cow Peas as for Soy Beans (see instructions on previous pages). Prepare the soil well. Don't plant until the soil is warm and not too wet. Plant $1\frac{1}{2}$ inches deep. Inoculate the seed with "Farmogerm" so that the little pear-shaped nodules on the roots of the Cow Pea will form and work day and night to their capacity gathering nitrogen from the air. The methods we advise for planting, harvesting and threshing Soy Beans, with slight modifications, may be used for Cow Peas.

VARIETIES OF COW PEAS

"New Eras." We are very partial to the "New Eras" as an all-round variety for general culture—especially in the North and Middle Atlantic States. The "New Era" is an early variety. In the South two crops of "New Eras" are grown in one season. The habit of the "New Eras" is erect. It can be mowed with ease. The vines are fine with many branches and this makes splendid hay. The "New Eras" also yield heavily of peas, which are of a brown color and medium size. Both vines and Cow Peas are rich in protein content. Beginners in Cow Pea culture may well select the "New Eras," whether they seek the peas, hay, silage, pasture, or whether they want to turn under for soil improvement. See Price List.

Whippoorwills. This is a standard early variety for general purposes. It grows vigorously, matures early, is fairly erect, yields well for both hay and grain. See Price List.

The Gray Crowder, also called Gray Whippoorwill, has become a recent great favorite among growers. It is a speckled variety like the old Whippoorwill. The "Gray Crowder" yields more hay, more beans, and has a greater root growth. It is therefore a great general purpose Cow Pea, producing heavily of both hay and grain and leading as a soil renovator. We have fine "Gray Crowders." See Price List.

Blacks. These are a little later than the above varieties. Yield heavily of vines but produce less grain. Has the trailing habit. One of the best to plant in corn for pasture or turning under. See Price List.

Cow Peas require 30 pounds per acre planted in rows, and $1\frac{1}{2}$ bushels per acre broadcasted. Cow Peas are especially valuable to plant in corn fields for late pasture or turning under for soil enrichment. The Cow Pea, like the Soy Bean, deserves much more attention, agriculturally, than it has yet received.



Cow Peas.



Field of Cow Peas



Cutting Red Cob White Ensilage Photo by Courtesy of Coe Mortimer Co., New York

SEED CORN

As a result of the disastrous season of 1917, there will be many of our Seed-Corn customers of past seasons wanting to re-establish certain varieties of corn upon their farms this year. These will find us prepared to serve them. However, the continued dry growing season has resulted in a somewhat shortened supply for us. We take this means to urge early orders as a means of procuring seed corn. Last year orders for many hundreds of bushels had to be returned to the senders. The same thing will doubtless again happen to those waiting until near planting time to order.

Very nearly every bushel of seed corn we offer was produced here in Lancaster County. Dry growing weather and a long season has resulted in the quality being first class. After selecting the seed ears at husking time, every known method of taking best care of the corn for seed purposes is employed. Ears are hung in especially prepared racks in our warehouse. No two ears touch. Perfect air circulation is around each ear. In this way the drying-out process is complete. Besides natural air-drying, heat is applied in damp or extreme cold weather. The corn is not allowed to freeze. The nub and butt grains are carefully removed by a separate operation before shelling. Corn is thoroughly fanned and cleaned after being shelled.

Germination of Seed Corn you buy from us must be good. We urge every purchaser to buy his seed corn early—and make careful tests. Any corn that he should find to prove unsatisfactory, either in regard to cleanliness or germination, we want him to return to us—per the terms of the Money-Back Offer printed inside the front cover page of this catalog. Seed Corn Stocks you purchase of us will prove satisfactory and dependable.

“Red Cob White Ensilage”

In our estimation, this is the best special ensilage corn, as well as the best fodder corn. It is very tall and leafy throughout its length and yields an almost unbelievable tonnage of either ensilage or fodder. The grain is white and the cob red. “Red Cob Ensilage” may be depended upon anywhere. In the North and wherever seasons are short the ears of corn will not fully mature. Where the season is of average length “Red Cob White” will mature considerable grain. We have sold this variety as a special ensilage corn for a number of years and we receive uniformly good reports from users. Our stock of seed is first class—having been well matured, dried and protected. See Price List.

ADD SOY BEANS TO YOUR SILAGE. Under Seed Corn we take space to urge our friends who have Silos to grow Soy Beans for Silage as well as Corn. One part Soy Bean growth to four parts Corn will make of your Silage a perfect ration. The Soy Bean plant will supply the protein that the Corn lacks. You can grow the Soy Beans right in the same row as the Silage Corn. Or plant the Soys separately. Read pages 22 to 24 for comments on Soy Beans as a source of Protein.

"Lancaster County Sure Crop"

A Variety for Two Purposes:

(1) For Cutting as Ensilage. (2) Filling your Crib

Lancaster County Sure Crop for Ensilage. Each year finds more of this variety coming into use as a straight ensilage type of corn. When we first sold it we catalogued it for cribbing uses only. Several customers tried it out for silage purposes, and liked it so much better than any sort they ever used, that it has found a permanent place on their farms. Indeed it makes fine stover. Since the more general use of the silo, farmers have come to believe that considerable corn, as well as stalk, should go into the silo. And where the length of the season permits it, they believe the grains should be well glazed before cutting. Farmers holding this view are strong believers in Lancaster County Sure Crop corn for this use. It has surely served them well—as is proved by our growing trade in it for the purpose. Several Farm Agents in Pennsylvania and adjoining States recommend this variety highly for silage. Several large dairy-men depend on it entirely for their silos. Lancaster County Sure Crop is quite tall, and very leafy. It withstands drought—develops ears early. Will mature some corn well to the North. This year will show an increased demand for Lancaster County Sure Crop for ensilage uses—and we urge you to order your supply of it very

early—long before planting time—as our stocks are not large and may be taken away before that time.

Lancaster County Sure Crop for Filling Your Crib. As the best corn for a variety of soils, we do not think this kind can be excelled. Lancaster County Sure Crop differs in type from every other corn on the list. It is of a golden yellow appearance on the ear. When shelled, it has a sort of reddish yellow or speckled appearance. (Corns that shell red are good yielders for rough and ready farming.) This variety will not take prizes at a corn show—it doesn't conform to the fancy, straight row manner of growth that Corn judges like to see. The ears are very long, but not proportionately thick. 14 to 20 rows of grain—rows tend to grow curved rather than straight. (Note pictures.) The grains fill out very well—and hard—from butt to tip. They are not very deep but more square. Rows set closely together—with very little waste space between them. There is not much cob, so that the proportion of shelled corn to ear is very satisfactory.

A good habit of this corn is to produce a good ear on every stalk in the field. We recommend it for use where other kinds of corn have not shown up well on soils of just average fertility, or even on poor ground, or where proper culture could not be given. This variety will please under such conditions.

Rich in Protein. No corn is richer in protein than Lancaster County Sure Crop. This has been established chemically and by practical experiment. **HUSKS EASILY.** This is worthy of mention. Those who do the actual work will appreciate this easy husking.



Lancaster County Sure Crop

SHALL WE SUBSTITUTE? In ordering Seed Corn always advise your second choice, if you have any Early orders of Seed Corn insure getting your first choice.

SEED CORN ON THE EAR. Early in the season we can accept orders for some varieties on the ear. As soon as our corns are thoroughly dried out we start tipping, butting, shelling, grading, cleaning, after which only Shelled Seed Corn can be procured. This season we can't furnish Ensilage or Improved Leaming on the ear, only shelled. Only full even bushel lots corn on the ear 70 lbs. each will be sold. Don't order fractional bushel of corn on the ear.



Ears of Lancaster County Sure Crop

Seed Corn—Cribbing Varieties

Reid's Yellow Dent

Not one year have we had enough of this variety to supply the demand for it. Reid's Yellow Dent is a first-rate, all-around, practical variety of corn. Ears are medium in length. Grains are narrow and deep. Rows run regular from end to end. Reid's has a tendency to fill out well at both tip and butt. The cob is red and very thin. Few corns

show such a big proportion of grain to cob as Reid's Yellow Dent. Reid's is early. Not early enough for the Northern exposed slopes of the Pennsylvania mountain sections, but will mature nicely anywhere else in Pennsylvania, Ohio, New Jersey, Delaware, Virginia and West Virginia. Suitable for land that is only moderately fertile, as well as for rich soils.

The strongest point in favor of "Reid's Yellow Dent" is its tendency to produce a fine ear on every stalk. This is an important test of any variety. No corn will yield

heavily per acre unless each stalk can be depended upon to yield a creditable ear. Reid's is a strictly yellow corn both shelled and on the ear. The fodder of Reid's is medium to tall. It is leafy. This is desirable in case of prolonged drought. Reid's has been grown on "Hoffman Homestead Farm" a number of years with great success. If your land is of the average kind—neither extremely rich nor extremely poor—and your season of average length, you need not hesitate to plant Reid's Yellow Dent. See Price List.

White Cap Yellow Dent

This is a large eared variety. The sides of the grains are yellow and the caps of the grains are white. This type of corn yields well even on thin land. It matures in Southern half of Pennsylvania, Ohio, New Jersey and further South. Fodder is tall. We have many customers growing White Cap with great success. The grains are square, rather than pointed. The ears taper slightly and toward the tip of the ear are not so deep as in the center. This variety will stand rough farming and even neglect better than others. On fairly rich soils long and heavy ears will be produced. White Cap Yellow Dent is rightfully a very popular and productive variety of corn. See Price List.

Golden Yellow Dent

This is another very rich colored yellow corn. The ears are a trifle thicker and a trifle shorter than Reid's Yellow Dent. The grains are deep, somewhat pointed. The red cob is small. Golden Yellow Dent shells well. Seventy-two pounds of ears frequently yield sixty-four pounds of grain. A good reliable yielder. Yields heavily and reliably. Fodder is medium to tall, and leafy. Our Golden Yellow Dent is grown on a farm adjoining our own by a very careful farmer.

See Price List.



Golden Yellow Dent

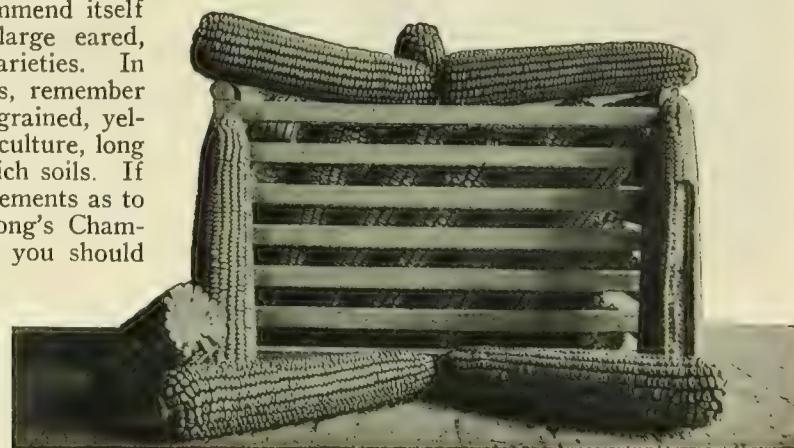
SHALL WE SUBSTITUTE? In ordering Seed Corn always advise your second choice if you have any. Early orders of Seed Corn insure getting your first choice.

Improved Early Leaming

This is the genuine, original Early Leaming Corn that was originated by J. S. Leaming in Ohio many years ago. The earliest variety on our list—will mature in 90 days. The ears grow low down on the stalk. Matures very early, ripening next to the Flint Corns. The color is a rich yellow. Ears taper somewhat with a tendency to come to a point at the tip. This characteristic offends the corn experts, but the variety will please all who seek an extremely early corn that will yield well in sections where the season is necessarily short. This variety should do well even North of Pennsylvania, and if planted in time will mature even in higher altitudes. Where the season for growing corn is long, or of even moderate length, we would prefer some of the other varieties we offer. Improved Leaming has a place where the season is short that cannot be filled by other dented varieties. See Price List.

Long's Champion Yellow Dent

This variety will commend itself to those in search of large eared, yellow, deep grained, varieties. In considering such varieties, remember that all long-eared, deep-grained, yellow sorts require careful culture, long seasons and moderately rich soils. If you can meet these requirements as to soil and season, then "Long's Champion" is just the variety you should select. It is capable of producing immense yields of corn. "Long's Champion" should be planted further apart than smaller eared sorts. It should receive careful cultivation throughout the season. Our experience is that Long's Champion is one of the most profitable varieties on our list, making extraordinary yields when farmed by good farmers on good land. Ears of twelve inches or more in length are not at all unusual for our "Long's Champion." The ears are thick, as well as long. The rich, yellow grains are deep and a good ear is truly a mass of corn. Prices—See List.



Johnson County White

The only variety of pure white corn that we offer. Johnson County White is almost perfect in its formation and wins more prizes in the big shows than any other corn. Besides being almost perfect in formation it is a large eared variety with very deep grains. The ears do not taper except near the tip. The fact that Johnson County White Corn has taken the Grand Champion Prize in four successive National Corn Shows is the best evidence of its uniformity of type and perfection of form and shape.

This variety needs a comparatively long season. Don't plant it in Northern Pennsylvania, Northern New Jersey, or other sections of same latitude. It will mature in all the Southern Counties of Pennsylvania as well as Southern half of Ohio, New Jersey, Indiana and States to the South. In this section it may be planted in soils of moderate fertility. Johnson County White will produce larger crops of corn than the large yellow eared varieties under same conditions. There is a mistaken belief that White Corns, or even White Cap Corns, do not possess nearly the same feeding value as yellow corns. There can be only the slightest difference in feeding value—not more than 1 per cent. at most, and this should not deter any one from giving trial to "Johnson County White," where the climate will permit early planting and late harvesting. Nearly all corns that have so large an ear as Johnson County White do not have a deep grain. In this respect, Johnson County White is an exception. A large ear of this variety is almost a solid mass of corn of great weight and beauty. It is worthy of any farmer's attention. See Price List.



Alfalfa From "Northwest" Seed

How to Grow Alfalfa

1. PLANT IN A DEEP, LOOSE, WELL-DRAINED SOIL. Where soils are rather thin the condition can be remedied by deep plowing. Alfalfa has a deep-feeding root system which can not be utilized without favorable top soil conditions. When this is furnished the roots will soon reach down through rather stiff clay soils. Soils that are sandy or lacking in fertility should be corrected by heavy applications of manure. If the land is sour it must be sweetened by liming. See paragraph 5.

2. THE SEED BED MUST BE WELL PREPARED. The soil should be thoroughly pulverized to considerable depth and then made quite firm by rolling or dragging. The land must have a chance to settle. It usually takes as much as six weeks for land to settle, though in periods of frequent heavy rains the settling process may require only four weeks. The disc and harrow are the tools needed to follow the plow in soil

preparation. After the ground is thoroughly prepared it should be harrowed after each rain. If it does not rain the land should be harrowed every ten days until the seed is sown; this will insure sufficient moisture for germination and destroy the weed seeds in the soil. Unless the land is thoroughly freed of weeds ahead of seeding there is danger of same making headway and choking out the Alfalfa plants while they are young and tender. When you plan Alfalfa seeding long in advance you should grow cultivated crops ahead of the Alfalfa, and make every effort to destroy every possible weed plant before it reseeds itself.

3. IF SOIL LACKS HUMUS it is well to supply it by turning under clover sod or cow peas or soy beans or crimson clover or sweet clover. This will make the soil friable and with the manure you apply will give the Alfalfa the fertility of soil to sustain it in its early growth. Alfalfa when established is a strong grower and will look out for its own feed if there is anything in reach. But when the plant first starts it is indeed weak and must have plenty of available food in order to make a good growth the first year. Then it will build a strong tap root which will enable it to winter well and start vigorously to produce growth of hay the following Spring.

4. INOCULATION IS NECESSARY. This means that you must plant in the soil nitrogen-fixing germs or bacteria, without which Alfalfa cannot flourish. Where sweet clover grows vigorously by your roadside it is possible your land has naturally the proper bacteria to grow Alfalfa, as these two bacteria seem to be the same, and where one grows the other will thrive. Your soil may be full of clover bacteria or cow pea or soy bean bacteria, but these germs will not help your Alfalfa. So that it will be necessary to supply these Alfalfa germs or bacteria artificially. We believe the very best bacteria to buy is that sold under the name of "Farmogerm." We keep it in stock at all times and furnish it to our customers. See about "Farmogerm" on page 32 of this catalog. The manufacturers of "Farmogerm" were the original discoverers and introducers of commercial bacteria and their product is the most dependable that can be secured. Their laboratory processes are most elaborate and scientific. We absolutely know after putting out thousands of dollars' worth of "Farmogerm" that this form of cultures is all that is claimed for it. There are other methods of inoculating Alfalfa but we cannot recommend them.

5. USE OF LIME FOR SOIL ACIDITY. Alfalfa must have soil that is sweet and not acid. Where crops of grain have been grown successively for many years soils are apt to become acid. You can test your soil yourself, as follows: Buy a nickel's worth of blue litmus paper at your drug store. Take a knife and cut into the ground you want to test, pressing the earth slightly apart. Then push a piece of the blue litmus paper into the opening and press the earth firmly together so that the blue litmus paper will be held firmly and leave it there for several hours. The soil must not be too dry. If the paper turns from blue to red it is evident that your soil is acid and needs lime to correct it. To insure correct results the test should be repeated in several parts of the field. Burned lime should not be used in greater quantities than two tons per acre. If ground limestone is used an application of 3000 pounds per acre is recommended. Where agricultural lime is procurable it is safer to use than either of the above forms, as it is not caustic. Two tons of lime or more, not caustic, per acre may be used. All

lime must be applied after plowing and same must be worked in thoroughly, preferably by discing and, if possible, a few weeks before seeding.

6. BEST TIME TO SEED. This is different in different localities and depends upon climatic conditions and upon whether you can give proper attention to soil preparation, weed killing, etc., in advance of any set time for seeding. You can sow either Spring or Fall, here in the Middle Atlantic and Ohio Valley States. A very good rule is to seed as long ahead of the most trying season for the young plants as possible. Any time in late April, May or June in the Spring, or late July, August or early September in the Fall is permissible, provided the other conditions in these paragraphs have been taken care of. Where very hot mid-summers must be feared, early Fall seeding should be considered. Where very severe winters are anticipated Spring seeding may be preferred. We have observed that among the successful Alfalfa growers of Pennsylvania and adjoining states Spring and Fall seeding are practiced in about equal proportion and with about equal success.

7. SHALL THE SEED BE COVERED? By all means cover the seed. Seeding on top as clovers and timothy are occasionally seeded will be risking failure. On heavy loam soils cover the seed from three-fourths to one inch. On sandy soils that dry out readily cover one and one-half to two inches. Alfalfa seeds have a hard coat and will not germinate unless the seed is firmly packed in damp soil. When seed is broadcasted a shallow set smoothing harrow or a weeder must be used. We believe in rolling after working in the seed. Alfalfa disc drills do splendid work as the seed can all be placed in the exact depth that is required.

8. HOW HEAVY TO SEED. In the East more seed is needed than in the West. We advise using plenty of seed. Ten to twelve pounds would be sufficient here in the East if all other conditions were exactly as they should be. Unless you have eliminated all danger from weeds and are absolutely sure of sufficient dampness to encourage perfect germination and can place every seed at the right depth you will be much safer if you sow twenty pounds per acre. We know many successful Alfalfa men who put in thirty pounds per acre. This is a matter of judgment which must be considered together with every other condition under which the Alfalfa bed is started.

9. ABOUT NURSE CROPS. Nurse crops, where there are some weeds to contend with, help to check them in Spring seeded Alfalfa. A nurse crop may be harvested and the income derived will help toward the expense of starting the Alfalfa. This way the use of the land the first year is not entirely surrendered to the Alfalfa. The nurse crop should be sown lightly. Heavy seeding will rob the Alfalfa of moisture and fertility. Don't use oats. Oats drinks too much water and shades thickly. Spring barley, beardless preferred, at rate of $\frac{3}{4}$ bu. per acre, is the most suitable grain to use for nurse crop. Don't plant nurse crops with Alfalfa in the Fall. When nurse crops are used in the Spring sow the grain and Alfalfa separately.

10. SELECTION OF SEED OF MOST IMPORTANCE. Unfortunately, good Alfalfa seed is not sold from every country store. Indeed, poor seed has been the cause of many poor stands and failures. There has never been an excess of real good seed. Alfalfa Seed of real merit always sells high in price. Indeed, the highest priced seed in the market is usually the cheapest and safest. The loss resulting from poor seed is much greater than the difference in cost of seed. The loss comes from the labor thrown away, the time sacrificed, and the disappointing yields—not to speak of weeds introduced. Seed should be clean as possible and high in germination. It should be largely bright in color and as plump as possible. A shrunken seed may come up but will never make a real strong plant. Seed grown in the short seasons of the Northern border seems to start better and stronger and surer than that produced further South. Seed produced on irrigated lands is not equal to that produced on unirrigated lands. We have given special attention to selection of Alfalfa Seed stocks for our trade. On pages 6 and 7 you will find our brands described. These were gathered personally by our representative, who went right to the sources of production and selected stocks of seed from first hands that can be relied upon.



WINTER SEED WHEAT

Winter Seed Wheat is our great specialty in the Fall. There is now growing for us an immense acreage which will be ready to deliver to our customers shortly after harvest time next July. Selected strains of the hardiest varieties known will be very carefully cleaned by most modern machinery, and offered to you. It will pay you to select a variety from the list we will offer.

Inoculate
with



It Means Better Crops—Better Soils—Less Fertilizers

"Farmogerm" is the highest grade—most effective—most successful inoculation for legume seeds of all kinds. We say this after having made investigation of cheaper articles sold for the purpose. There are a number—but we fear to handle them. "Farmogerm" has an important advantage in that it may be purchased in advance of the time it is needed and kept on hand ready for use without danger or risk of spoiling. This is due to a peculiar tube that is inserted in each bottle of "Farmogerm" which admits the necessary quantity of pure air and yet keeps out destructive contamination. "Farmogerm" is a pure culture, or growth of nitrogen-fixing bacteria, that has been selected and bred up to transform large amounts of nitrogen from the air into soluble nitrates.

Unless your soil naturally contains the proper bacteria, you cannot successfully grow Alfalfa, Soy Beans, Cow Peas, Field Peas, Sweet Clover, Vetches, Crimson or other Clovers without inoculating your seed. The best form of inoculation is "Farmogerm." Its careful use will insure success of all legume crops if all the other ordinary precautions have been taken.

"Farmogerm" will increase the yield, quality and give quicker growth and earlier maturity. It will increase the food value of legumes, make them grow in new localities, where they cannot be otherwise grown. "Farmogerm" will enrich the soil for future crops by assisting the plant to gather at its roots large deposits of nitrogen thereby increasing the fertility and value of the soil. "Farmogerm" is endorsed by farmers, Federal Agricultural Department, and by many State Experiment Stations.

"Farmogerm" is only useful for Legume plants—by which we mean plants that gather nitrogen at the roots. The bacteria is different for each crop. When ordering, state for what you will use "Farmogerm." We recommend "Farmogerm" for Alfalfa, Alsike, Crimson Clover, Sweet Clover, Medium Clover, White Clover, Canada Peas, Cow Peas, Garden Peas or Beans, Soy Beans and Vetches.

"Farmogerm" will be furnished by us, delivered to your Post Office or Express Office at the following prices:

1/4 Acre size, \$50; 1 Acre size, \$2.00;
5 Acre size, \$7.50.

Write for special quotations on 50 or 100 acre size.

When ordering state for what it is to be used, as the bacteria is different for different crops—is easily applied—directions for use go with every package sold.

Rates of Seeding

"Successful Farmers Recommend Heavy Seeding."

The right quantity of seed per acre differs in different sections—depends on the location and nature of the soils. It is agreed in all sections that spare seeding is not economical. Best qualities of seed are always found to be the cheapest in the end—the extra cost per acre is small and results are more satisfactory. The following table suggests quantities per acre and may be a helpful guide:

	lbs. per acre	lbs. per bushel		lbs. per acre	lbs. per bushel
Red Clover.....	8-14 Lbs.	60 Lbs.	Cane (Sorghum) Broadcast....	50- 75 Lbs.	50 Lbs.
Alsike Clover.....	8-10 "	60 "	Emergency Pasture Mixture...	70-	56 "
Alfalfa or Lucerne.....	15- 20 "	60 "	Dwarf Essex Rape, Broadcast..	4-	50 "
Crimson or Scarlet Clover.....	10- 15 "	60 "	Vetch.....	50- 60 "	60 "
Sweet Clover.....	12- 20 "	60 "	Cow Horn Turnip.....	2- 4 "	20 "
White Clover.....	6- 8 "	60 "	Lawn Grass.....	60- 80 "	20 "
Economical Mixture.....	12- 20 "	56 "	Canada Field Peas (Broadcast).150-180 "		60 "
Timothy.....	12- 20 "	45 "	Canada Field Peas (with oats). 75-100 "		
Blue Grass.....	40- 50 "	14 "	Cow Peas (Broadcast).....	60- 90 "	60 "
Red Top, Fancy, Solid Seed.....	10- 12 "	32 "	Cow Peas in drills.....	25- 35 "	60 "
Red Top, Chaff.....	30- 40 "	14 "	Soy Beans (Broadcast).....	60- 90 "	60 "
Orchard Grass.....	30- 45 "	14 "	Soy Beans in drills.....	20- 30 "	
English (Perennial) Rye Grass	35- 50 "	24 "	Buckwheat.....	50- 60 "	48 "
Meadow Fescue.....	30- 50 "	24 "	Wheat.....	90-120 "	60 "
Brome Grass, Bromus inermis.....	42- "	14 "	Corn.....	8- 10 "	56 "
Tall Meadow Oat Grass.....	25- 35 "	14 "	Corn (Silage).....	10- 20 "	56 "
Hay & Pasture Mixture.....	30- 35 "	32 "	Rye.....	85-100 "	56 "
Golden Millet.....	30- 50 "	48 "	Oats.....	70-100 "	32 "
Japanese Millet.....	15- 25 "	32 "	Barley.....	95-120 "	48 "
Hungarian Millet.....	30- 50 "	48 "	Speltz.....	75- 90 "	40 "
Sudan Grass (Broadcast).....	16- 18 "		Potatoes.....	.600-900 "	60 "

Soy Beans

"Wilson Black" (Sometimes called "Early Wilson"). The favorite Soy Bean among Eastern farmers—better liked each year as a general-purpose variety. It is one of the best for hay and bean production and for the silo. On account of its wonderful growth and slender stems and branches, the "Wilson Black" variety makes the finest hay. On poor ground "Wilson Blacks" will grow four feet tall, and on fertile ground they will get as tall as six feet. We think Wilsons will make a little more hay, and hay of a little better quality than other varieties. This variety is early enough to mature beans in the Southern half of Pennsylvania, Ohio, New Jersey and States to the South. The Wilsons will do well on poor soils. We would give it good soil to produce forage—poor soil to produce beans. The Wilson is medium size, jet-black bean. Will easily yield 20 bu. beans per acre—yields above 30 bu. per acre have been secured. Beginners not sure as to the variety they should start will do well to choose on the "Wilson Blacks". It is a great variety for hay, forage, soiling, and green manuring. See Price List.

"Manchu" This variety has been used throughout Pennsylvania, and especially the mid-western States—Ohio, Indiana, and Illinois, for the past several seasons. As a general all-purpose bean, it has few rivals. The seed of the Manchu variety is of medium size, yellow in color, with a sort of small, dark-brown or blackish mark where it was fastened to the pod. A noticed trait of the Manchu is that it don't shatter or shell out its seed so easily as many other sorts. Produces seed at a heavier rate than some kinds. For forage is a valuable kind—grows tall—erect and bushy—the foliage well covers the plant. Is popular as a variety for hogging down. Matures the beans in about 110 days of normal season. See Price List.



"Virginia" Nowadays used more than ever. A brown, rather flat, oblong bean—suited for Maryland, Virginia, Delaware, and Southern sections of Pennsylvania, New Jersey and Ohio. Productive of beans—makes a good forage growth. See Price List.

"Mammoth Yellow" This variety will not mature beans in sections north of Virginia. It is grown very largely in the South. It may be grown on soil so barren that other crops will die for want of fertility. "Mammoth Yellows" make a tall growth—coarser in its texture than the other sorts. Valuable to plant with corn for silage, or for plowing under.

"Early Yellow" or "Ito San" This is a yellow bean. The earliest variety on our list. This sort will produce hay of fine texture—probably not as great a quantity of hay as some of the slightly later kinds. Yields heavily of beans. After the crop of beans has been threshed, the straw will be equal to Clover hay in feeding value. See List.

"Mixed Soy Beans" These beans serve well for a cover crop to turn under—also save you a little in their cost. They are of good quality—sound germination.

FACTS ABOUT SOY BEANS

Soy Beans have a higher protein content than oil meal, pound for pound. You can grow 20 to 30 bushels Soy Beans per acre on poor ground.

One bushel Soy Beans contains as much digestible protein and as much digestible fat as six bushels of oats, or four bushels of corn meal, or six bushels corn and cob meal.

Ground Soy Beans are greedily eaten by all stock, are easily digested, have a tonic effect whether fed by itself or mixed with other feed.

Soy Bean hay cut before beans have ripened is greater in value of protein and fats than Alfalfa hay.

Soy Bean straw and hulls, from which the ripe beans have been threshed, is equal in value of protein and fat content to Clover hay. Fed to cows will cause an increased flow of milk.

Soy Beans will make two to four tons of hay per acre.

Soy Beans cut green and packed with corn for silage—1 part Soys to 4 parts Corn will make a perfect ration of much more value than corn silage alone.

A handful Soys fed to horses each meal will keep hair and hide in perfect condition.

Colts, sheep and stock can be wintered on Soy Bean hay alone.

The unthreshed vines fed to hens will bring about early and sustained winter egg production.

Corn and Soys grown together can be hogged down with convenience and profit.

An acre of Soys will produce as much meat as two acres of corn.

Soys can be grown on land too poor and too acid to produce Clover.

Soys are a legume and gather nitrogen from the air. Your soil will improve while producing crops of valuable feed. There is nothing better to plow under for rapid soil enrichment.

Planted in corn, Soys will aid the corn crop rather than curtail it. The nitrogen gathered by the Soys become available to the corn.

Wheat following Soys yield 20 to 30 per cent. better than when it follows oats.

How to Grow Soy Beans

Growing Soys needs little more attention than growing the old standard crops—and they are not nearly as difficult to grow as Alfalfa. We give the following directions:

1. **PREPARE YOUR SOIL WELL**—just as you should for corn. Try to kill the weeds—especially if you are going to broadcast instead of plant in rows. Frequent cultivation in advance of planting season will accomplish weed killing.

2. **DON'T PLANT TOO EARLY**. The soil must be warm. A week or ten days after ideal conditions for corn is usually the safe time. Soys will rot in cold, wet soil, but will grow quickly in a warm seed bed. Planting Soys is permissible until early July, other conditions being favorable.

3. **DON'T PLANT DEEP**. $1\frac{1}{2}$ inches is nearer right than any other depth. One inch may do and two inches does not mean failure.

4. **INOCULATION**. To get the full benefit from growing Soy Beans you must inoculate the seed. The gathering of nitrogen from the air by the roots will not take place unless you supply the germ to start the action. Soil from another Soy Bean field may be used. It is, however, most certain and more economical to use commercial inoculation for the purpose. We believe "Farmogerm" to be the best inoculation in the market and we highly recommend it. See page 11. "Farmogerm" is applied right to the seed before it is planted. It takes only a few minutes and the process is simple. The nitrogen gathered from the air and deposited in the soil in excess of the plant's requirement is worth every bit of expense connected with growing Soy Beans, so that the top growth of hay and beans with their high percentage of protein is clear profit.

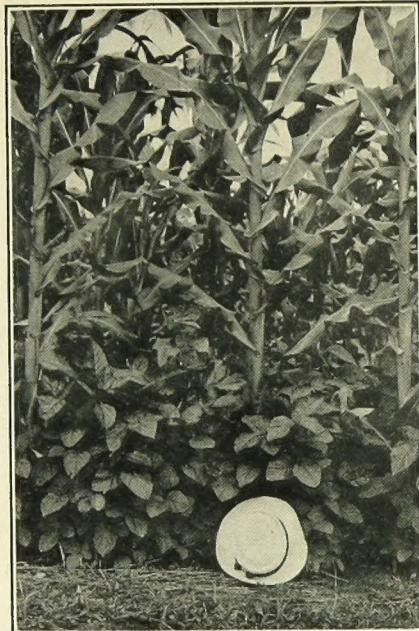
5. **PLANT EITHER IN ROWS OR BROADCAST**. If you broadcast by hand and work in with a harrow, $1\frac{1}{2}$ bushels are required. If drilled in with a drill with all holes open, $1\frac{1}{4}$ bushels are sufficient. You must be sure to kill weeds ahead of planting time if you broadcast. As a rule, planting in rows is preferable, whether you want to grow the beans or produce hay, green fodder, silage, or if you want to turn under for soil improvement. Planting in rows saves seed and permits cultivation. You will have to cultivate as often as you do corn. Plantings are made with rows 20 to 36 inches apart and two to three inches apart on the row. Twenty to thirty pounds per acre needed by this method, depending upon exact width of rows apart and upon size of variety of Soy. The most successful Soy men we know grow in rows as close as twenty inches apart. You must plan your method of cultivation in connection with width of rows.

6. **HOW TO PLANT THEM**. Nearly every corn planter can be adapted to plant Soys by getting a special disc. Grain drills, however, are used more frequently. A nine-hole or a twelve-hole can easily be adapted for rapid work by plugging two out of every three holes. A nine-hole drill will plant three rows at a time. A twelve-hole drill will plant four rows at a time.

7. **HARVESTING**. To make good Soy Bean hay—cut when half the pods are full grown and when top leaves begin to turn yellow. Cut them when there is no dew. Let lie in swaths until leaves are wilted, but not brittle. Rake early in windows, but let them thoroughly cure for several days. Then put them in small cocks and allow several more days. Prevent loss of leaves as far as possible.

8. **FOR BEANS**. Let stand until half the pods are dry and most of the leaves have fallen off. Same may be handled as advised above for hay. The old self rake is used by some for cutting. It gathers the stalks in convenient open bunches and permits gathering with but a slight loss from shattering. Haul to barn or stack.

9. **THRESHING**. This may be done by flail or by grain threshers. If the Soy Beans are for seed, care must be taken not to crack or split them. The removal of the concaves in the grain threshers is necessary. Special Soy Bean threshers can be bought.



Soy Beans and Corn for Silage

Cow Peas

Because of very high priced seed in recent years the Cow Pea crop has not been so popular as before. But this year, you can buy these Peas at quite a bit under prices of former years. Indeed, this is the year to get better acquainted with Cow Peas. The Cow Pea crop has much the same uses as the Soy Bean crop, namely:—improvement of soil—hay production—fodder—silage—and peas. The hay has just about the same feeding values. Methods of growing, seeding and harvesting correspond. Both crops are great producers of nitrogen when properly inoculated. There are two chief differences. Cow Peas can be grown on even poorer ground than Soys—Cow Peas are more recumbent than Soys, and therefore more difficult to harvest. For pasturing, hogging or turning under for soil improvement, the trailing habit is no objection.

IMPORTANT—Don't Plant Too Early

Some folks confuse Cow Peas with Canada Field Peas. Please note this especially. Canada Field Peas are planted very early, mostly along with Oats—but Cow Peas dare not be planted until the ground is good and warm, or they will rot in the ground. Don't plant Cow Peas in ground that is too cold or too wet—this is strictly a warm-weather crop. Plant $1\frac{1}{2}$ in. deep. Follow Soy Bean instruction. Inoculate the Seed with Farmogerm.

"Clay" Cow Peas. This variety is widely used in the sections where they produce large quantities of Cow Peas. It is a prolific yielder of peas. And at the same time has just about as much merit in a general way as any other strain of peas. Splendid for soiling and forage. When properly inoculated, it is a good gatherer of nitrogen. Although not on our list for a few past seasons, these "Clay" peas will be welcomed by many customers as their old favorite. The quality of these peas is equal or better than any other variety, and we offer them to you with our recommendation. See Price List.

—Cow Peas—Continued next page

If You Grow Your Own Seed You Need a "CLIPPER" CLEANER



The No. 1-B Clipper Seed Cleaner

adjusted on the pulleys, so as to get the correct speed of the fan and if the turning is regular, you can remove the light grains from the heavy, to the extent that the weight of the grain being cleaned can be raised from three to five pounds per bushel. "Clipper" Cleaners are used by Agricultural Colleges, Experiment Stations, seed breeders, Seedsmen generally in the United States, Canada, Europe, Australia, South America, and New Zealand, in fact, all over the world.

We give here, **Sectional View of "Clipper" Cleaners**, which is the same for No. 1-B and No. 2-B, showing Vertical Air Shaft, Dust Hood, Grain Box, and other special features of the "Clipper" Cleaners.

FIG. 1—SHOE, with two receiving grooves for screens. The screens are securely held in place by a compressing rod.

FIG. 2—STRAW-SPOUT, for carrying off large particles, straw, etc., etc.

FIG. 3—SCREENING SPOUT, for removing sand, fine seeds, etc. It is opened by pulling out slide, above spout.

FIG. 4—VERTICAL AIR SHAFT, through which the draft passes upward, carrying off chaff, dust, etc., through Dust Hood (see Fig. 6). The perfect grain and seed fall and pass out at Fig. 5 into the Grain Box, which will hold 5 bushels. It has a Lifting Board at the end, which allows the contents to be easily scooped into sacks. Our Grain Box prevents waste, makes sweeping floors unnecessary, and also furnishes convenient storage for screens and all detachable parts of the machine, when not in use.

FIG. 6—DUST HOOD through which chaff, dust and worthless matter are discharged. All light, imperfect and foreign grain and seeds are discharged at opening (see Fig. 7).

FIG. 8—FAN, with iron arms, fitted on turned steel shafting, equipped with Cone Pulley. This allows changing the speed of the Fan, which is necessary to properly clean grain and seeds of varying weights.

No. 1-B "Clipper" is a farm size hand mill that will clean twenty bushels Seed Wheat per hour, or ten bushels Clover or Timothy Seed per hour. Dimensions are: length, 4 ft. 8 in.; width, 2 ft. 2 in.; height, 3 ft. 8 in.; weight, crated, 185 pounds.

Twelve Screens, 19 in. wide and $2\frac{1}{4}$ in. long, go with the No. 1-B Mill, an outfit of screens suitable for cleaning Seed Wheat, rye, oats, corn, barley, peas, beans, clover, timothy seed, other grass seed, garden and vegetable seeds.

Plain Directions for Separating go with each mill. These are so easily understood that anyone can learn in a few minutes how to make the most delicate separations.

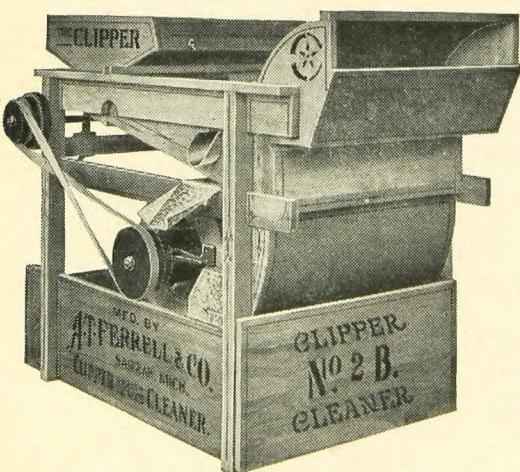
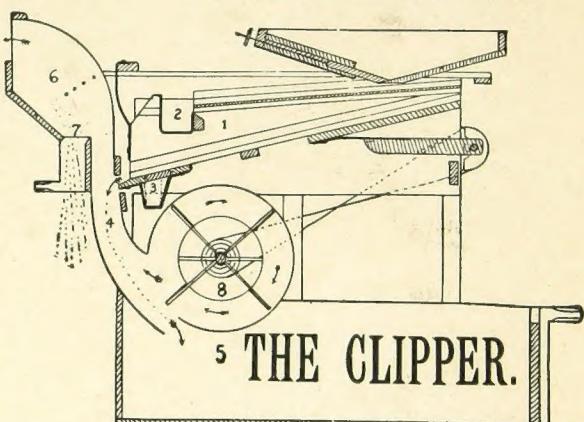
The No. 2-B Clipper does exactly the same work as the No. 1-B. Its capacity per hour is 25 bu. grain and 15 bu. grass seed. The screens (12 in number) are 6 in. wider than the No. 1-B screens. Dimensions of No. 2-B are 4 ft. 8 in. long, 2 ft. 8 in. wide, 3 ft. 8 in. high. Crated weight, 210 lbs. No. 2-B can be run easily by hand for cleaning grass seed, but for cleaning grain some kind of power should be applied— $\frac{1}{4}$ horse power is sufficient.

Price of No. 2-B Clipper is \$40.00

Price of No. 1-B Clipper is \$32.00

Freight paid to any railroad station in the United States, East of the Mississippi River.

Send orders for Clipper Cleaners to **A. H. Hoffman, Inc., Landisville, Pa.**



No. 2-B Clipper Seed Cleaner

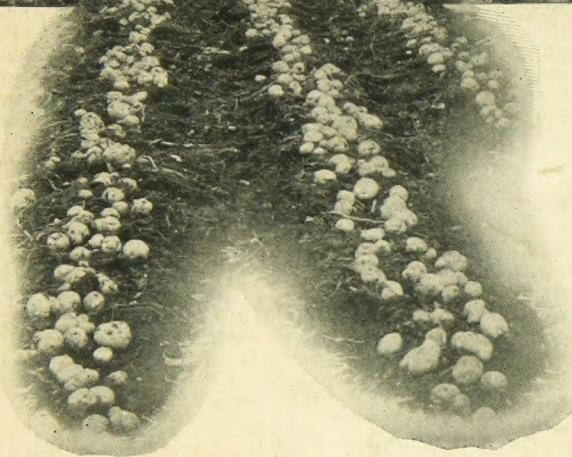
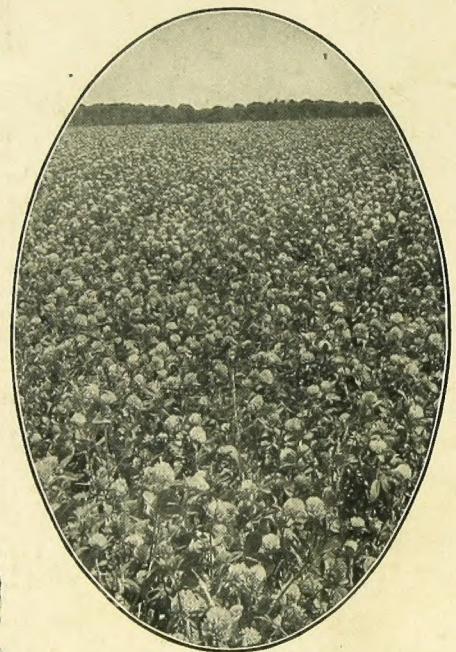
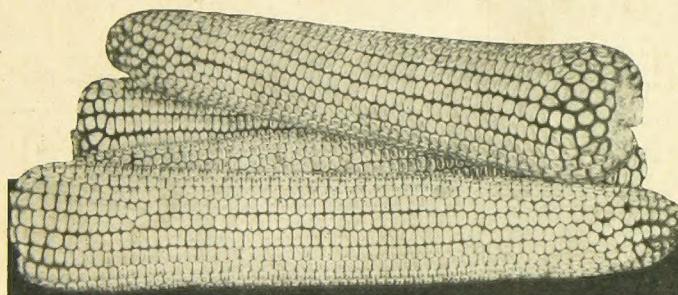


Photo taken in Maine—Where Hoffman's Seed Potatoes are Produced—There is Business and Pleasure back of such Seed



Sow Hoffman's Clean, Hardy Clover Seed



Hoffman's "White Cap Yellow Dent" Seed Corn

HOFFMAN'S SEED OATS—MOST PROLIFIC SORTS



A. H. HOFFMAN, Inc., Landisville, Lancaster County, Penna.